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(54) **Improved graphical user interface for interactive television and video on demand**

Grafische Benutzerschnittstelle für interaktives Fernsehen und Video-auf-Anfrage

Interface utilisateur graphique pour télévision interactive et vidéo à la demande

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- **18TH INTERNATIONAL TELEVISION SYMPOSIUM AND TECHNICAL EXHIBITION-SYMPORIUM RECORD CABLE SESSIONS, 11 June 1993 MONTREUX, CH, pages 555-567, XP 000379380 W.L.HOARTY 'Multimedia on Cable Television Systems'**
- **IBM DISCLOSURE BULLETIN, vol. 36, no. 02, February 1993 ARMONK, NY, US, pages 63-66, XP 000354262 'Conferencing Metaphor'**
- **IEEE INFOCOM '91- PROCEEDINGS, vol. 3, no. 7-4-9, 7 April 1991 - 11 April 1991 BAL HARBOUR, FL, US, pages 1127-1144, XP 000223440 H. TANIGAWA ET AL 'PERSONAL MULTIMEDIA-MULTIPOINT TELECONFERENCE SYSTEM'**

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**Description****BACKGROUND OF THE INVENTION****1. Field of the Invention:**

[0001] The present invention relates to the field of graphical user interfaces and multi-media display systems. More particularly, the present invention relates to a method and apparatus for selecting, viewing, and interacting with, programs and services from a source provider, such as for example, a video on demand server and/or an interactive multi-media system.

**2. Art Background:**

[0002] The combination of computer technology with television (TV) and audiovisual (A/V) systems has fostered the development of multimedia interactive entertainment systems. It is known that users desire interactive television and multimedia applications for home use. In particular, users desire to have maximum system flexibility, which permits the user to view any one of a selected number of movies or other audiovisual programs on demand from their home audiovisual television system. Advances in the digitalization and digital compression of data, in conjunction with improved communication transmission media, such as fiber optics, permit high-speed downloading of digitized data from a head end source provider to a plurality of users. The broad bandwidth of fiber optic cables permits interactivity between the user (herein referred to at times as a "subscriber"), and a source provider.

[0003] A variety of video on demand (VOD) systems have been proposed to permit a subscriber to select and view a video program at his convenience. The subscriber communicates to a source provider at a head-end, a request for a specified video program, such as a movie, at a specified time. The source provider then transmits the program to the subscriber in a manner such that it may be received during the specified time only, and by the single subscriber requesting and paying for it, without reception by other subscribers. (See for example, U.S. Patents Nos. 5,206,722; 4,995,078; and 5,247,347).

[0004] One of the most significant challenges in providing interactive television service and video on demand (VOD) capability, is the design of an interface which is easy and fun to use by average consumers. Historically, interactive television and pay-per-view ("PPV") systems which have been proposed provide a downloaded television listing of programs, video on demand movies, and other options for the user to choose from and execute. The subscriber, utilizing a remote control device in conjunction with a settop box coupled to a cable television, satellite direct broadcast or other communication system, selects a desired movie or program to be viewed. One such system is that disclosed

by U.S. Patent 4,706,121 (hereinafter the '121 patent), issued November 10, 1987 to Patrick Young. The system disclosed by the '121 patent provides that a downloaded television listing, including available movies for viewing, is displayed on a subscriber's television receiver. The downloaded television listing information may be viewed by title, category, date, as well as start time. Although the downloaded program information is displayed for user selection, the interface provided to the user is a simple listing of available source material for selection.

[0005] In the computer industry, a variety of graphic user interfaces have been developed to facilitate human interaction with computer systems. Many display systems utilize metaphors in the design of the interface as a way to maximize human familiarity, and convey information between the user and computer. It is well known that designing around a familiar metaphor helps reduce human learning time. Research in interface design using metaphors and man-machine interfaces, may be applied to multimedia systems, and in particular, to interactive television systems having video on demand capability. The marriage of video and television technology with computer interface technology provides users with maximum flexibility in storing, retrieving, and selecting television and other audiovisual programming.

[0006] As will be disclosed, the present invention's user interface provides a user friendly mechanism for subscribers to select and view audiovisual programming, such as movies and the like, using an intuitive user interface, which is fun and interesting to use. As will be described, the user interface of the present invention utilizes a metaphor in the form of a motion picture production studio back lot. Various spaces and objects exist in the metaphor, in both static and animated form, for identifying available programming and for providing a mechanism for the selection and viewing of a desired program by a subscriber.

[0007] Further examples of prior art arrangements are discussed in IBM Disclosure Bulletin vol. 36 No. 2, February 1993 Armonk, NY, USA, pages 63-66 XP 000354262, entitled "Conferencing Metaphor" and in a paper entitled "Multimedia on Cable Television Systems" W.L. Hoarty, 18<sup>th</sup> International Television Symposium and Technical Exhibition-Symposium Record Cable Sessions, 11 June 1993 Montreux, Switzerland, pages 555-567, XP 000379380.

**SUMMARY OF THE INVENTION**

[0008] The present invention provides apparatus and methods for presenting an improved graphical user interface for displaying and selecting video on demand programs, as well as other audiovisual programs and interactive services. In one embodiment, a video on demand (VOD) server is coupled to a communication medium which is in turn coupled to a plurality of subscribers. A settop box is coupled to the communication me-

dium at each subscriber's location, for receiving digitized programming in the form of movies, television signals and other data from the video on demand server at the head end. The settop box is coupled to a television or audiovisual entertainment system. The settop box includes a central processing unit (CPU) coupled to a memory and other electronic modules such as decoders, decompressors and audiovisual generators. Computer programming and data files are stored within the memory and accessible by the CPU. The CPU generates and displays the present invention's graphical user interface on the subscriber's television, and controls any interactive communication between the user, the video on demand server, as well as any other head-end provider of audiovisual material.

[0009] The graphical interface of the present invention is based upon a metaphor in which a world of Spaces is organized as part of a movie studio back lot metaphor through which a user may navigate. The back lot metaphor includes a Poster wall which presents to the user a series of movie Posters representing available selections. The Poster wall may include video selections for movies and/or other programming arranged by category, viewer preference, "Top 10" listings for the week, or any combination thereof.

[0010] In the presently preferred embodiment, when a user selects a Poster using a touch sensitive input device, the CPU senses the user's selection and generates an animation which displays the Poster coming off the wall and appearing in the foreground of the television screen. Once the Poster has moved to the foreground, additional information about the movie or other service is provided to the user by reading the Poster itself. By again touching the touch sensitive input device to select the image of the Poster, the CPU generates an opening animation includes the presentation of a video preview: If not selected, the Poster prompts the user to further action by moving in an animated fashion.

[0011] The graphical user interface of the present invention includes a video viewing space where a preview of the movie is shown. The video viewing space includes a plurality of control button functions and displays controlling, for example, volume, mute, channel and current channel selection, intermission, intermission status, selection of the feature presentation, and exit. In the present embodiment, an animated cash register icon is displayed to permit a user to ascertain movie price, select, and thereby "purchase" the desired movie. Touching the input device, or otherwise activating the cash register function, results in a "ring-up" sale animation, and the termination of any currently displayed preview, along with the initiation of viewing of the feature presentation. Upon selection of the cash register icon, the video on demand server downloads the selected video to the settop box for display on the user's television.

[0012] The interface of the present invention further includes Agents referred to as "Extras" which are manifestations of the Agent described in the Parent of this

application, and are metaphors for category or advertisements for specific movies. Extras appear in an animated form on the user interface and move freely between Spaces within the studio back lot metaphor. If the user takes no action towards an Extra, the Extra simply moves out of the field of view of the user on the interface. However, if a user selects an Extra, the CPU senses the selection of the Extra and initiates an animated sequence in which the Extra introduces a Poster to the user. If a user is interested in viewing the Extra's advertised movie, the Poster introduced by the Extra behaves in the same manner as a Poster which has been selected from the Poster wall. In the event a user is not interested in viewing the video advertised by the Extra, the user may touch any area on the background of the interface and the Poster is dismissed in an animated fashion by the CPU.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

- 20 [0013] Figure 1 is a functional block diagram of one possible interactive television/video on demand system utilizing the teachings of present invention.
- 25 [0014] Figure 2 illustrates a functional information flow diagram for the present invention's video on demand server.
- 30 [0015] Figure 3 is a functional block diagram of the present invention's settop box.
- 35 [0016] Figure 4 illustrates an overview of the present invention's studio back lot graphic user interface metaphor.
- 40 [0017] Figure 5 illustrates the present invention's Poster wall for the display of available video on demand selections.
- 45 [0018] Figure 6 illustrates the user panning feature of the interface of the present invention to navigate within the studio back lot metaphor.
- 50 [0019] Figure 7 illustrates the Poster wall of the present invention for the display of available video on demand selections.
- 55 [0020] Figure 8 illustrates a Poster Agent which is displayed upon a user's selection of one of the movie selections displayed on the Poster wall.
- 45 [0021] Figure 9 illustrates the Poster Agent holding an alarm clock in an animated sequence in the event a user does not select or dismiss the Agent within a predetermined time.
- 50 [0022] Figure 10 illustrates the video viewing space of the user interface of the present invention for the display of a movie preview upon the selection of the Poster Agent illustrated in Figures 8 and 9.
- 55 [0023] Figure 11 illustrates the video viewing space of the present invention in which controls are provided for user operation during the showing of a video on demand movie, including an intermission control function.
- [0024] Figure 12 illustrates the video viewing of the present invention in the event a user selects the movie intermission control function illustrated in Figure 11.

[0025] Figure 13 illustrates one example of the present invention's use of "Extras", which upon selection by a user, provide additional information on other selections available by a user.

[0026] Figure 14 is a map to assist the reader in understanding of the organization of the flowcharts of Figures 14(a) through 14(i).

[0027] Figures 14(a) and 14(b) illustrate flow charts of the operation of the present invention for the selection of a movie displayed on the present invention's Poster wall.

[0028] Figures 14(c), 14(d) and 14(e) are flow charts illustrating the operation of the present invention for controlling user activated functions during the showing of a selected video or other audiovisual program.

[0029] Figures 14(f), 14(g), 14(h) and 14(i) are continuation of the flow charts illustrated in Figures 14(a) through 14(e), further illustrating the operation of the present invention for the selection of intermission and other control functions.

[0030] Figure 15 is a flow chart illustrating the selection and operations of Extras displayed on the interface of the present invention.

#### NOTATION AND NOMENCLATURE

[0031] The detailed descriptions which follow are presented largely in terms of interface display images, methods, algorithms and symbolic representations of operations of data bits within a computer memory. These algorithmic descriptions and representations are the means used by those skilled in the data processing arts to most effectively convey the substance of their work to others skilled in the art.

[0032] An algorithm is here, and generally, conceived to be a self consistent sequence of steps leading to a desired result. These steps are those requiring physical manipulations of physical quantities. Usually, though not necessarily, these quantities take the form of electrical or magnetic signals capable of being stored, transferred, combined, compared, displayed and otherwise manipulated. It proves convenient at times, principally for reasons of common usage, to refer to these signals as bits, values, Spaces, objects, elements, symbols, characters, Agents, images, terms, numbers or the like. It should be borne in mind, however, that all of these and similar terms are to be associated with the appropriate physical quantities, and are merely convenient labels applied to these quantities.

[0033] In the present case, the operations described herein are machine operations performed in conjunction with the human operator. Useful machines for performing the operations of the present invention include general purpose digital computers, digitally controlled displays, or other similar devices such as settop box control systems, video on demand servers and the like. In all cases, there should be borne in mind the distinction between the method operations of operating a computer,

multi-media display, video on demand, or other similar system, and the method of computation itself. The present invention relates to apparatus and method steps for operating a computer and/or interactive multi-media display systems, and processing electrical or other physical signals to generate other desired physical signals.

[0034] The present invention also relates to apparatus for performing these operations. This apparatus may be specially constructed for the required purposes or it may comprise a general purpose computer selectively activated or reconfigured by a computer program stored in the computer. The method steps presented herein are not inherently related to any particular computer or other apparatus. In particular, various general purpose machines may be used with programs in accordance with the teachings herein, or it may prove more convenient to construct more specialized apparatus to perform the required steps.

[0035] Additionally, no particular programming language has been indicated for carrying out the various methods described herein. This is due in part to the fact that not all languages might be mentioned are universally available. Each designer of a particular computer,

interactive multi-media system, or other display apparatus will be aware of a language which is most suitable for his immediate purposes. In practice, it has proven useful to substantially implement the present invention in a high level language which is then compiled into machine executable object code. Because the computers, servers, settop boxes and other devices which may be used in practicing the instant invention consist of many diverse elements, no detailed program listing has been provided. It is considered that the operations and other procedures described herein and illustrated in the accompanying drawings are sufficiently disclosed to enable one of ordinary skill to practice the instant invention.

#### DETAILED DESCRIPTION OF THE INVENTION

[0036] The following detailed description will be divided into several sections. The first of these will describe a general system arrangement for generating and displaying the user interface of the present invention. The general system description will describe one possible video on demand system incorporating the teachings of the present invention. Subsequent sections will describe various functional aspects of the present invention, such as the present invention's studio back lot metaphor, Poster wall and Poster Agents, "Extras" and other interactive features, as well as the overall structure and operation of the present invention's interface.

[0037] In the following description, numerous specific details are set forth to provide a thorough understanding of the present invention. These details include functional blocks representing data processing devices, state diagrams, screen, menu and other configurations to assist the user in navigating through the interface, and to pro-

vide a thorough understanding of the present invention. It will be apparent to one skilled in the art that the present invention may be practiced without these specific details. Additionally, although the user interface of the present invention is described with reference to a video on demand system, many of the features and other aspects of the present invention have application to a variety of other graphic user interface systems and environments. In other instances, well known circuits and structures are not described in detail so as not to obscure the present invention unnecessarily.

[0038] Moreover, many of the functions and features of the present invention, such as various objects displayed in the studio back lot metaphor, Poster Agents, "Extras", icons, and selection methods, are not static events and are perceived by the user as having motion, color, sound and/or animation. The present invention also includes audio features utilizing sounds, which compliment the visual interface and are played in some instances simultaneously with other functions of the present invention, and which cannot be illustrated graphically herein, but are, nevertheless, part of the present invention. Due to the limitations of a written specification, the reader is referred to a video tape entitled "Video on Demand User Interface" submitted by the applicants concurrent with the filing of the application on which this patent is based.

#### **GENERAL SYSTEM CONFIGURATION**

[0039] The multimedia video on demand system of the present invention is illustrated in block diagram form in **Figure 1**. As shown in **Figure 1**, a video on demand (VOD) server 20 provides video on demand programming services to a plurality of users over a transmission medium 22. The transmission medium 22 may comprise a cable television network, a telephone system, a direct broadcast satellite system, microwave system, fiber optic, and/or radio frequency (RF) system, or a variety of other electronic transmission systems known in the art.

[0040] As illustrated in **Figure 1**, the transmission medium 22 is coupled to a settop box 24 which comprises an audiovisual transceiver and an infrared (IR) remote receiver 25, as well as other separately identifiable elements, as will be described more fully below. Although the receiver 25 is illustrated as being an IR receiver, it will be appreciated that a variety of other communication systems may be used, including radio, low power cellular and the like. As illustrated, the set top box 24 is coupled to a television 28 having a screen 29, or other audiovisual device such as a video tape recorder (not shown). A remote control input device 30 communicates with the settop box 24 through the IR receiver 25, for the selection of various functions and features of the present invention as described herein. The remote control 30 includes a touch sensitive display 31 which, as will be described, permits a user to operate on the user interface of the present invention. In one embodiment,

the touch sensitive display 31 permits a user to control a cursor displayed on the television screen 29 to select objects, features and other functions of the present invention's user interface. Other additional audiovisual devices may be coupled to the television 28, as well as to the settop box 24, such as laser disc players, computers and the like.

[0041] Referring now to **Figure 2**, the VOD server 20 includes a number of other subserver systems including

- 10 a media stream server 40 for providing digitized movies and other programming, as well as any effects such as transition animations which may be generated remotely or by the server 20. Additionally, the server 20 includes a subscriber/billing transaction server 42, which performs necessary subscriber verification, billing, and obtains user information for video on demand as well as other programming. A settop box server 44 executes video on demand application programming code for the system, as well as handles the storage, retrieval, and processing of any necessary application data. As illustrated in **Figure 2**, the media stream server 40, the subscriber/billing transaction 42, and the settop box server 44, are coupled to the transmission medium 22 through an interface (I/F) circuit 46.

[0042] Referring now to **Figure 3**, the settop box 24 of the present invention is shown and described in additional detail. The settop box 24 includes a central processing unit (CPU) 50 which is coupled to an internal data transport and flow control system, comprising a

- 30 system bus or switched memory architecture (referred to generally by the numeral 52). A memory 54 is also coupled to the internal data transport and flow control system 52, as is an audiovisual (A/V) decode/decompressor 56. The memory 54 stores programming code and other data required by the CPU 50 to generate the user interface of the present invention, and execute the various functions described herein. As shown, the IR input circuit 25 is also coupled to the internal data transport and flow control system 52, as is a network transfer interface circuit 60. The network transfer interface circuit 60 controls the transport in and out of video on demand data and programming information through to the settop box 24 from the VOD server 20. The transport out path 62 represents a back channel in which user selections 40 on the interface of the present invention may be communicated to the VOD server 20. Similarly, downloaded video and other data is provided over a transport in path 64 to the network transfer interface 60 of the settop box 24. Additional tuners, demodulators and the like are not 50 shown in **Figure 3**, but are contemplated to be included in the settop box 24 to read and display data from the VOD server 20. These additional devices include circuitry for providing picture in picture (PIP) windows, as well as descrambling circuitry to descramble downloaded video data from the VOD server 20 received by the settop box 24.

[0043] In operation, one of the first tasks in utilizing the system illustrated in **Figure 1**, is for the subscriber

to log on and be verified as an authorized user of the video on demand/interactive television system. The specific process and/or protocol for verifying subscriber information is not described in the Specification, but it is contemplated that a variety of different subscriber verification protocols including public/private key encryption, may be utilized to support the verification process. Once the subscriber is verified, the server 20 transmits a log-in acknowledgment to the settop box 24, along with an authentication key which permits the subscriber to access the VOD server 20. Moreover, it is contemplated that a hierarchy will be provided by the present invention for queries that a user may initiate once authentication of the user is accomplished. For example, the user may obtain category information from the VOD server 20. The category information may represent, for example, a "Top 10" listing of user video preferences. Additionally, catalog information may be obtained from the VOD server which may represent, for example videos matching a particular category search initiated by the user, as well as information on specific video selections.

[0044] As will be described, through the use of the present invention's user interface, various functions may be selected such as start, stop, pause, intermission, and resume of a movie, and such command data is coupled by the settop box 24 over the transport out channel out 62 to the VOD server 20. As the user navigates through the user interface of the present invention, various application programming code and data is provided by the VOD server 20 to the CPU 50 of the set top box 24, for display on television 28.

#### VIDEO ON DEMAND GRAPHIC INTERFACE

[0045] The following detailed description of the current preferred embodiment of the invention refers to, and incorporates fully, the copending Parent patent application. Additionally, with respect to that portion of the present invention which relates to the user interface, the reader is referred to the video tape entitled "Video On Demand Graphic User Interface" (hereinafter sometimes referred to as "the videotape"), submitted concurrent with the filing of the application on which this patent is based, to assist the reader in understanding the present invention as disclosed herein.

[0046] Most popular graphic user interfaces that are available, such as the Xerox Star®, Apple Macintosh®, and Microsoft Windows® are based upon the "desk top metaphor". In a desk top metaphor system, the display screen is treated as a virtual desktop. Graphical symbols placed on the virtual desktop are used to represent common objects found in an office environment, such as files, file folders, and printers.

[0047] The user interface environment of the present invention utilizes a "movie studio back lot metaphor", which, as illustrated in **Figure 4** presents the user with a virtual world of a movie studio back lot. The interface

design provides an animated three dimensional view through the gates of a back lot entitled "Moviewood". As shown in **Figure 4**, the back lot studio metaphor of the present invention includes a "bird's eye view" of a center square of a studio back lot. The metaphor includes a variety of Spaces surrounding the studio back lot. For example, the Spaces shown in **Figure 4** include, an indoor sound stage 70, a Poster wall 80 displaying Posters of currently available movies, a film archive 71, and a blimp 76 are displayed. As illustrated in **Figure 4** and the videotape, various movie characters and animated objects are moving throughout the interface of the present invention. Some of the animated characters and objects are carrying sets, riding bicycles, etc.

[0048] In the presently preferred embodiment of the invention, remote 30 includes a touch sensitive screen 31 to permit the subscriber to touch various displayed objects and characters on the graphic user interface shown in **Figure 4**. As will be described, many of the objects and characters displayed in the present invention's studio back lot metaphor perform a function when touched by the user. Various Spaces, Objects, Data Objects, Buttons, Portals (including a Wayback Portal) and Agents, are provided in the user interface of the present invention as illustrated in **Figure 4**, and first initially disclosed and hereby incorporated from the Parent application.

[0049] Referring now to **Figure 5**, the present invention's user interface includes a Poster wall 80, which, as will be described, presents to the user a series of movie Posters, such as for example movie Posters 82, 84, 86, 88, and 90. Each of the movie Posters represents an available video selection to the user which may, for example, comprise the "Top 10" video rentals for the week, or perhaps the newest movies which are available for downloading and viewing from the video on demand server 20. It will be appreciated that the particular movies (herein the terms "movies" and "videos" are used interchangeably) displayed on the Poster wall 80 may represent movies in certain categories, specific user preferred movies, or may be arranged in other desired configurations on the Poster wall 80.

[0050] The present invention permits a user to Pan in at least two directions, and thereby navigate through the movie studio back lot interface. In one embodiment of the present invention, panning is accomplished within the user interface by placing a finger on the screen 31, and moving the finger in the opposite direction the user wishes to move. The CPU 50 responds to the user's finger motion by generating a "Panning active" sound, and moving the background image of the user interface on the screen in the opposite direction of the finger's movement, thereby bringing other objects into view. In the present embodiment, it is contemplated that a user may Pan a full 360 degrees, and that in other embodiments, the user may Pan in an up or down direction as well. The reader is referred to the Parent application for a further description of the present invention's Panning ges-

tures for navigating through the interface.

[0051] Assume for the sake of example that a user desires to Pan to the right of the Poster wall 80 illustrated in Figure 5. The user operates the remote control 30 and using the touch sensitive screen 31, moves his finger to the left on screen 31, thereby Panning to the right. As shown in Figure 6, as the user Pans to the right relative to the position of the user with respect to the screen 29, an additional Space is displayed entitled the "Critic's Cafe" 92. By touching, or otherwise selecting, the Critic's Cafe 92 using the remote control 30, the interior of the Critic's Cafe is displayed (not shown) along with other objects which may be selected. Although the present invention is described with reference to a remote control 30 for the selection of objects and navigation through the present invention's user interface, it will be appreciated by one skilled in the art that a variety of other selection methods and devices may be utilized to accomplish the same result. For example, it is contemplated that the remote control 30 (see Figure 1) may utilize a joystick instead of the screen 31 for navigation and selection.

[0052] Referring now to Figure 7 in conjunction with the flowcharts of Figures 14(a) through 14(c), the present invention's method and apparatus for the selection of video on demand movies and other programming services will be disclosed. As previously described, the Poster wall 80 displays a pre-defined number of "Posters" of available movies (or other programs) which may be selected and viewed by the user. When a user touches a Poster, for example Poster 90, on the Poster wall 80, the CPU 50 senses the user selection and generates an animation which displays the Poster coming off of the wall and appearing in the foreground. The purpose of the Poster moving to the foreground is to permit users to obtain more information about the video, before deciding whether or not to rent or otherwise order the video from the VOD server 20.

[0053] It is anticipated that a regular user of the present invention may desire to select movies without triggering the Poster opening animation, thereby saving time. Thus, in accordance with the presently preferred embodiment of the invention, after a user interacts with the Poster wall 80 more than three times, the longer animation sequence is no longer activated by the CPU 50 when a Poster is touched, but rather, a shorter animation is activated, and the Poster simply leaps into the foreground.

[0054] As provided in the flow charts of Figure 14, when a Poster on the Poster wall 80 is touched, an animation is triggered. The Poster animation sequence of the present invention makes the Poster have the appearance of jumping off the Poster wall, moving to the foreground and unfurling as illustrated in Figure 8. As shown in Figure 8, an unfurled Poster 93 appears in a cartoon-like animated form having hands 94, a Poster body 96, and a Poster information area 98. Poster information area 98 is provided for the display of information

related to a particular movie or other programming available for selection by the user. In the present embodiment, information presented within the Poster information area 98 appears to the user as a movie poster advertisement, similar to that provided in a newspaper, magazine or at a movie theater. As set forth in the flow chart in Figures 14(a)-14(i), if subsequent to the display of Poster 93 the user touches another area of the user interface, such as the background, Poster 93 appears

5 to snap back onto the Poster wall 80, with the user continuing to view the Poster wall as shown in Figure 7.  
[0055] Similarly, if after the selection of a Poster 93 and its display in the foreground, a user takes no further action by either touching Poster 93 or the background, the Poster, in an animated form, appears to hold a clock 100 and begins tapping its "foot" 102 as illustrated in Figure 9 and provided in flow chart form in Figures 14 (a)-14(e). The foot tapping animation is intended to communicate to the user that the Poster 93 was activated, and that some action is necessary in order to proceed with the selection of the desired movie or other programming. In the present embodiment, the animated foot tapping of the Poster 93 continues to be displayed until either the Poster 93, or the background, is touched. It will be appreciated that other possible animations may be used by Poster 93 to remind the user that some action is necessary to proceed with the selection of a movie.

[0056] In the event a user touches the Poster 93 (utilizing, for example, the remote control 30) the present invention then displays a video viewing space, as will be described with reference to the flow chart of Figures 14(b)-14(i).

[0057] Upon the selection of the Poster 93, the CPU 50, executing programming stored in the memory 54, displays a video viewing space 120 diagrammatically illustrated in Figure 10. The video viewing space represents a Space for the control of the television 28, watching television programming, movies, movie previews, and the like. Overlaying the video displayed within the video viewing space 120 are a variety of Space control functions, which, after a pre-determined amount of time fade from view. In the present embodiment, touching the screen 31, of the remote control 30, results in the CPU 50 re-displaying the controls. The controls represent objects which comprise individual graphical function icons, that are rendered on the user interface of the present invention by the CPU 50. As provided in the Parent application on which this application is based, each control function is an object-oriented programming type of object containing data methods which can be invoked to act on the data. For example, a cash register button function 130 is displayed to permit a user to "purchase" the selected movie. Touching, or otherwise activating, the cash register function 130 results in a "ring-up sale" animation, the termination of any currently displayed preview of the selected movie, and the initiation of the viewing of the feature movie selected. Upon final selection of the movie by activating the cash register function

130, the server 20 downloads the selected video to the settop box 24 for display on the television 28.

[0058] As illustrated in **Figure 10**, additional controls displayed on the interface of the present invention include a mute button function control 132 for muting the sound of the currently displayed programming. Similarly, a preview notice 134 is provided to indicate that the currently displayed programming constitutes a preview rather than a feature presentation.

[0059] A volume control 136 permits the user to adjust the audio volume utilizing the remote control 30. An up-down channel control 140 permits the user to change channels of the television 28 when a user is viewing television programming.

[0060] An exit control 142 is similar to the Wayback portal disclosed in the Parent application. As shown, the exit control 142 consists of an exit sign with a small rectangular frame 144 which encloses a snapshot of the previous Space from which the user has traveled from within the studio back lot metaphor. For example, if a user has moved from the Poster wall 80 to the video viewing space 120, the rectangular frame 144 will display Poster wall 80. By touching, or otherwise activating the exit function 142, the user may move through this exit Wayback portal to the position facing the Poster wall 80, and exiting the video viewing space 120. In the presently preferred embodiment, the selection of exit 142 cancels the currently-viewed movie, however, it is contemplated that a user may, as in the case of a real life theater, exit the movie to perform some function (for example answering the phone), and then return to the movie still in progress. Reference is made to the flow charts of **Figures 14(a)-14(i)** for a detailed description of the operation and function of the controls illustrated in Figure 10, and the resulting operations by the CPU 50 of the settop box 24.

[0061] Referring now to **Figure 11**, once the user has selected a video on demand movie from the VOD server 20, CPU 50 downloads the selected video programming over the medium 22 to the settop box 24 for viewing on the television 28, as described above. The graphic user interface of the present invention is modified as illustrated in **Figure 11**, and described in the flow charts of **Figures 14(a)-14(i)**. More particularly, the cash register 130 is replaced with a five minute intermission control button 150. The selection of the intermission control button 150 by the user results in the currently viewed feature presentation being paused and an intermission being interjected.

[0062] As illustrated in **Figure 12**, if a user during the viewing of a movie selects a channel using the up-down channel control 140, the intermission control button 150 is replaced by a return to movie button function 160 as shown in **Figure 12**. The user may activate the return to movie function 160, and the CPU 50 of the settop box 24 resumes the display of the selected movie or other programming. Also, as illustrated in **Figure 12**, an intermission countdown clock 162 is displayed in the video

viewing space 120 and identifies in a countdown fashion how much time is left in the current intermission cycle. If a user activates the channel change function 140 during an intermission cycle, countdown clock 162 remains visible as well as the return to movie control function 160. Thus, during an intermission a user may view programs from a cable television or other source, and select the channels using the channel change function 140.

[0063] It will be appreciated by one skilled in the art that the various objects and control functions illustrated in **Figures 10, 11 and 12** are adaptable to other graphic user interface designs, and may be interchanged, substituted and supplemented dependent upon the particular user interface application. The reader is referred to the flowcharts illustrated in **Figure 14(a)-14(i)** for a detailed operational description of the present invention intermission and return to movie control functions as described above.

[0064] Referring now to **Figures 13 and 15**, the present invention's graphic user interface includes "Extras" which operate asynchronously in the studio back lot metaphor and notify the user of events, advertisements, and/or available video on demand movies and the like. Extras are manifestations of the Agent as disclosed in the Parent application. As provided in the Parent, an Agent is an anthropomorphic character which aids the user in navigating around the user interface, and in dealing with events that occur in the "world" created by the user interface. In the studio back lot metaphor of the present invention, Extras are manifestations of advertising which wander randomly throughout the back lot metaphor. Extras can be ignored by the user, or alternatively, may be activated by selecting the Extra displayed on screen 29 (utilizing the remote control 30).

[0065] One example of an Extra is shown in **Figure 13**. An Extra in the form of a "Cupid" 170 changes form if selected by the user utilizing the remote control 30, and performs a short animation prior to displaying a Poster for an available video not otherwise shown on the Poster wall 80, or displaying an advertisement for a Poster on the Poster wall 80. Once the Extra introduced a Poster, the Poster behaves as do other Posters displayed upon the Poster wall 80. It is contemplated that Extras can also "advertise" other Spaces in the studio back lot metaphor. For example, an Extra may advertise the "Critic's Cafe", "Archive" or other Space within the back lot world. If a user activates that Extra, the user is then transported to the Space which was advertised by the Extra. Extras may also advertise related services available to the user, including for example, pizza delivery services, local/national merchants, or news, weather or sports programming.

[0066] Although Extra 170 of **Figure 13** is shown as having the form of a Cupid, it will be appreciated that the Extra can take on any shape. For example, as shown in the videotape entitled "VOD Graphical User Interface", Extras take the form of bats, spaceships, cupids, and the like. In effect, an Extra notifies the user of asynchro-

nous events, and like the Agent in the Parent application, may move in a semi-random order from Space to Space within the back lot metaphor.

**[0066]** Referring now to **Figure 15**, a flow chart illustrating the operation and sequence of steps executed by the CPU 50 in the generation and display of Extras is shown. As illustrated in **Figure 15**, if an Extra is in view on the television screen 29, it will be displayed on the back lot until it is touched or otherwise activated by a user. Upon activation, the CPU 50 modifies the visual appearance of the Extra to that of a Poster through an animation series. The Poster is then displayed in the foreground of the area of the studio back lot metaphor which the user is currently viewing. If a user does not wish to select the video advertised by the Extra, he may select other areas outside of the Poster using the remote control device 30. The CPU 50 then generates a Poster "leaving" screen animation sequence and the user is free to continue to navigate throughout the studio back lot metaphor.

**[0067]** In the event that the user desires to view the video advertised by the Poster introduced by the Extra, he may touch the Poster and CPU 50 executes the steps illustrated in **Figures 14(a)-14(i)**, as previously described with reference to the Poster wall 80. Similarly, if the Extra advertises other parts of the back lot metaphor, the activation of the Extra will result in the user being transported to that area on the back lot.

#### SUMMARY

**[0068]** The present invention as described provides methods and apparatus for a unique graphical user interface for video on demand, interactive television, and other audiovisual programs and services. The present invention's functions and features provide a user interface which assists subscribers to find and view programs and movies of interest, access related information, control a variety of audiovisual functions and devices, and order video on demand services from their homes and offices.

**[0069]** The teachings of the present invention may be applied to numerous other display devices and input mechanisms. For example, the present invention may be practiced using what is known as "virtual reality" input devices, such as but not limited to, a data input glove, body glove input device, etc. In addition, the present invention may be utilized with eye goggle displays which are worn by a user and coupled to the computer display system via fiber optics, wires and the like. When the present invention is utilized in conjunction with a virtual reality system, the user interface of the present invention would be viewed by a user through input goggles as being suspended in space. Interaction with the interface by the user may be done using an input glove or other virtual reality device worn by the user. Accordingly, it will be appreciated that the user interface of the present invention is not limited to conventional input or

display devices. The reader is referred to the following references for a further description of existing and proposed virtual reality systems. *Computerized Reality Comes of Age*, NASA Tech Briefs, page 10, August 5 1990 (Vol. 14, number 8); Iwata, *Artificial Reality with Force-Feedback; Development of Desktop Virtual Space with Compact Master Manipulator*, ACM SIGGRAPH, august 1990 (Vol. 24, number 4); Nash, *Our Man in Cyberspace Checks out Virtual Reality*, Computerworld, October 15, 1990; Daviss, *Grand Illusions*, Discover, June 1990.

**[0070]** While the present invention has been described with reference to **Figures 1 through 15**, it will be appreciated that the Figures are for illustration only, and do not limit the spirit and scope of the invention. By necessity, the description provided in the Specification describes, for example, screen images having certain attributes and features, however, it will be appreciated that the invention is not limited by the specific examples provided herein.

#### **Claims**

25 1. A display system for display of audiovisual programming characterized in a combination of elements that includes:

30 a receiver having a circuit for receiving said audiovisual programming from an audiovisual program source;

35 a user interface for the display of said audiovisual programming on a display, said user interface incorporating a virtual world having a plurality of virtual sites representing various locations in said virtual world, wherein at least one of said virtual sites presents said user with a plurality of representations of available audiovisual programming for display on said display, and further wherein said virtual sites are arranged such that each of said virtual sites is disposed relative to one another within said virtual world;

40 a user input device for allowing a user to interact with said virtual sites, said interaction permitting said user to select a desired audiovisual program, such that said selection results in said selected audiovisual program being displayed on said display; and

45 50 an element enabling said user to navigate between said virtual sites in said virtual world,

55 wherein said user interface further includes an anthropomorphic character which moves within said virtual world in an animated fashion between said virtual sites.

2. The display system as defined by claim 1 further

- characterized in that said anthropomorphic character, upon activation by said user using said input device, displays a representation of an additional audiovisual program selectable by said user.
3. The display system as defined by claim 1 or 2 further characterized in that, upon said selection of one of said representations by said user using said input device, said user interface displays a video viewing space on said display.
4. The display system as defined by claim 3, further characterized in that said audiovisual program corresponding to said selected representation is displayed for viewing by said user in said video viewing space.
5. The display system as defined by claim 4, further characterized in that said video viewing space includes a plurality of user selectable controls displayed on said display.
6. The display system as defined by claim 5, further characterized in that a preview of said selected audiovisual program of said selected representation is displayed prior to said selected audiovisual program, said selected audiovisual program being displayed upon a further selection of said selected representation by said user.
7. The display system as defined by claim 6, further characterized in that said at least one of said virtual sites presents said user with a plurality of said representations of available programming in a form of a wall, and each of said plurality of representations is in a form of a virtual Poster disposed on said wall.
8. The display as defined by claim 7, further characterized in that upon said user selects one of said Posters disposed on said wall, said Poster is displayed in an animated form in a foreground of said virtual world metaphor on said display.
9. The display system as defined by claim 8, further characterized in that said Poster displayed in animated form on said display further displays additional information relating to the audiovisual representation to which said Poster relates.
10. The display system as defined by claim 9, further characterized in that said anthropomorphic character, upon selection by a user, is displayed on said interface as changing into the form of a Poster in the foreground of said virtual world on said display.
11. The display system as defined by claim 10, further characterized in that said anthropomorphic character which has changed into a form of said Poster displayed in animated form on said display further displays additional information relating to the audiovisual representation to which said Poster relates.
- 5
12. The display system as defined by claim 11, further characterized in that said controls displayed on said display in said video viewing space includes a volume adjustment control selectable by said user.
- 10
13. The display system as defined by claim 11, further characterized in that said controls displayed on said display in said video viewing space includes a mute control adjustment selectable by said user.
- 15
14. The display system as defined by claim 11, further characterized in that said controls displayed on said display in said video viewing space includes a Wayback exit control selectable by said user, the selection of said Wayback exit control resulting in said user interface automatically navigating said user to the last virtual site from which said user was located in said virtual world prior to said user entering said video viewing space.
- 20
15. The display system as defined by claim 11, further characterized in that said audiovisual source comprises a video on demand server for providing a plurality of user selectable audiovisual programs to said receiver.
- 25
16. The display system as defined by claim 15, further characterized in that said audiovisual source further provides television audiovisual programming to said receiver.
- 30
17. The display system as defined by claim 16, further characterized in that said controls displayed in said video viewing space includes a video purchase control selectable by said user for purchasing an audiovisual program selected by said user.
- 35
18. The display system as defined by claim 17, further characterized in that said video purchase control may be activated by said user during the display of a preview of said selected audiovisual program in said video viewing space.
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19. The display system as defined by claim 17, further characterized in that said controls displayed in said video viewing space includes a television channel selector, said user selecting a desired television channel for viewing on in said video viewing space using said input device.
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20. The display system as defined by claim 17, further characterized in that said controls displayed in said video viewing space include an intermission con-
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- trol, activation of said intermission control by said user resulting in said video on demand server pausing said selected video purchase by said user using said video purchase control.
21. The display system as defined by claim 20, further characterized in that said video on demand server pauses said selected video purchased by said user for a predetermined time.
22. The display system as defined by claim 21, further characterized in that said input device includes a touch sensitive screen.
23. The display system as defined by claim 21, further characterized in that said input device comprises a remote control device in communication with said receiver.
24. A method for the display and selection of said programming in a display system for display of audiovisual programming characterized in a combination of elements that includes the steps of:
- providing an element including a circuit for receiving said audiovisual programming from an audiovisual program source;
- providing a user interface for display of said audiovisual programming on a display, said user interface incorporating a virtual world having a plurality of virtual sites representing various locations in said virtual world, wherein at least one of said virtual sites presents said user with a plurality of representations of available audiovisual programming for display on said display, and further wherein said virtual sites are arranged such that each of said virtual sites is disposed relative to one another within said virtual world;
- providing an element for interacting with said virtual sites using a user input device, said interaction permitting a user to select a desired audiovisual program, such that said selection results in said selected audiovisual program being displayed on said display;
- enabling said user to navigate between said virtual sites in said virtual world,
- wherein said user interface further includes an anthropomorphic character which moves within said virtual world in an animated fashion between said virtual sites.
25. The method as defined by claim 24, further characterized in that said anthropomorphic character upon activation by said user using said input device, displays a representation of an additional audiovisual program selectable by said user.
- 5                   26. The method as defined by claim 24 or 25, further characterized in that upon said selection of one of said representations by said user using said input device, said user interface displays a video viewing space on said display.
- 10                 27. The method as defined by claim 26, further characterized in that said audiovisual program corresponding to said selected representation is displayed for viewing by said user in said video viewing space.
- 15                 28. The method as defined by claim 27, further including the step of displaying in said video viewing space a plurality of user selectable controls displayed on said display.
- 20                 29. The method as defined by claim 28, further including the step of displaying a preview of said selected audiovisual program of said selected representation prior to said selected audiovisual program, said selected audiovisual program being displayed upon a further selection of said selected representation by said user.
- 25                 30. The method as defined by claim 29, further characterized in that said at least one of said virtual sites presenting said user with a plurality of said representations of available programming is in a form of a wall, and each of said plurality of representations is in a form of a virtual Poster disposed on said wall.
- 30                 31. The method as defined by claim 30, further characterized in that upon said user selecting one of said Posters disposed on said wall, said Poster is displayed in an animated form in a foreground of said virtual world on said display.
- 35                 40                 32. The method as defined by claim 31, further characterized in that said Poster displayed in animated form on said display further displays additional information relating to the audiovisual representation to which said Poster relates.
- 40                 45                 33. The method as defined by claim 31, further characterized in that said anthropomorphic character, upon selection by a user, is displayed on said interface as changing into the form of a Poster in the foreground of said virtual world on said display.
- 45                 50                 34. The method as defined by claim 33, further characterized in that said anthropomorphic character which has changed into the form of said Poster displayed in animated form on said display, further displays additional information relating to the audiovisual representation to which said Poster relates.
- 50                 55                 35. The method as defined by claim 28, further includ-

- ing the step of displaying a volume adjustment control selectable by said user as one of said controls displayed on said display in said video viewing space.
36. The method as defined by claim 28, further including the step of displaying a mute control adjustment control selectable by said user as one of said controls displayed on said display in said video viewing space.
37. The method as defined by claim 28, further including the step of displaying said controls displayed on said display in said video viewing space including a Wayback exit control selectable by said user, the selection of said Wayback exit control resulting in said user interface automatically navigating said user to the last virtual site from which said user was located in said virtual world to said user entering said video viewing space.
38. The method as defined by claim 28, further characterized in that said audiovisual source comprises a video on demand server for providing a plurality of user selectable audiovisual programs to said receiver.
39. The method as defined by claim 38, further characterized in that said audiovisual source also provides television audiovisual programming to said receiver.
40. The method as defined by claim 39, further including the step of displaying a video purchase control selectable by said user for purchasing an audiovisual program selected by said user as one of said controls displayed in said video viewing space.
41. The method as defined by claim 40, further characterized in that said video purchase control may be activated by said user during the display of a preview of said selected audiovisual program in said video viewing space.
42. The method as defined by claim 41, further including the step of displaying a television channel selector, said user selecting a desired television channel for viewing on in said video viewing space using said input device.
43. The method as defined by claim 42, further including the step of displaying an intermission control, the activation of said intermission control by said user resulting in said video on demand server pausing said selected video purchased by said user using said video purchase control.
44. The method as defined by claim 43, further characterized in that said video on demand server pauses said selected video purchased by said user for a predetermined time upon the activation of said intermission control.
45. The method as defined by claim 44, further characterized in that said input device includes a touch sensitive screen.
46. The method as defined by claim 44, further characterized in that said input device comprises a remote control device in communication with said receiver.
47. The display system as defined by claim 1, further characterized in that said receiver includes a settop box including a circuit for receiving said video programming from a video server.
48. The display system as defined by claim 47, further characterized in that said anthropomorphic character is an Extra represented an anthropomorphic character providing commercial content.
49. The display system as defined by claim 48, characterized in a combination of elements including said Extra, upon activation by said user using said input device, displays a representation of an additional audiovisual program selectable by said user.
50. The display system as defined by claim 48, further characterized in that said Extra, upon selection by a user, is displayed on said interface as changing into the form of a virtual Poster displaying an audiovisual representation in the foreground of said virtual world on said display.
51. The display system as defined by claim 52, characterized in a combination of elements including said Extra which has changed into the form of said Poster displayed in animated form on said display, further displays additional information relating to the audiovisual representation to which said Poster relates.
52. The method as defined by claim 24, further characterized in that providing an element including the circuit includes providing a settop box.
53. The method as defined by claim 52, further characterized in that said anthropomorphic character is an Extra represented by an anthropomorphic character providing commercial content.
54. The method as defined by claim 53, further characterized in that said Extra, upon activation by said user using said input device, displays a Poster of an additional video program selectable by said user.

**55.** The method as defined by claim 54, further characterized in that said Extra, upon selection by a user, is displayed on said interface as changing into the form of a virtual Poster in the foreground of said virtual world on said display.

**56.** The method as defined by claim 55 characterized in a combination of elements including said Extra which has changed into the form of said Poster displayed in animated form on said display, further displays additional information relating to the video program to which said Poster relates.

#### Patentansprüche

**1.** Ein Anzeigesystem zur Anzeige von audiovisuellen Programmen, gekennzeichnet durch eine Kombination von Elementen, die umfaßt:

einen Empfänger, der eine Schaltung zum Empfangen der audiovisuellen Programme aus einer audiovisuellen Programmquelle aufweist; eine Benutzerschnittstelle für die Anzeige der audiovisuellen Programme auf einer Anzeige, wobei die Benutzerschnittstelle eine virtuelle Welt enthält, die eine Mehrzahl von virtuellen Plätzen aufweist, die verschiedene Orte in der virtuellen Welt repräsentieren, wobei wenigstens einer der virtuellen Plätze dem Benutzer eine Mehrzahl von Darstellungen von zum Anzeigen auf der Anzeige verfügbaren audiovisuellen Programmen präsentiert, und wobei ferner die virtuellen Plätze so angeordnet sind, daß alle virtuellen Plätze in Bezug zueinander innerhalb der virtuellen Welt angeordnet sind; eine Benutzereingabeeinrichtung, die es einen Benutzer ermöglicht, mit den virtuellen Plätzen in Interaktion zu treten, wobei die Interaktion dem Benutzer gestattet, ein gewünschtes audiovisuelles Programm derart auszuwählen, daß die Auswahl dazu führt, daß das ausgewählte audiovisuelle Programm auf der Anzeige angezeigt wird; und ein Element, daß es dem Benutzer ermöglicht, zwischen den virtuellen Plätzen in der virtuellen Welt zu navigieren,

wobei die Benutzerschnittstelle ferner eine anthropomorphe Gestalt enthält, welche sich innerhalb der virtuellen Welt in eine animierten Art und Weise zwischen den virtuellen Plätzen bewegt.

**2.** Das Anzeigesystem nach Anspruch 1, ferner gekennzeichnet dadurch, daß die anthropomorphe Gestalt bei ihrer Aktivierung durch den Benutzer unter Verwendung der Eingabeeinrichtung eine Darstellung eines zusätzlichen audiovisuellen Pro-

gramms, das durch den Benutzer auswählbar ist, anzeigt.

**3.** Das Anzeigesystem nach Anspruch 1 oder 2, ferner gekennzeichnet dadurch, daß bei Auswahl einer der Darstellungen durch den Benutzer unter Verwendung der Eingabeeinrichtung die Benutzerschnittstelle eine Videobetrachtungsfläche auf der Anzeige anzeigt.

**4.** Das Anzeigesystem nach Anspruch 3, ferner gekennzeichnet dadurch, daß das audiovisuelle Programm, das der ausgewählten Darstellung entspricht, zur Betrachtung durch den Benutzer auf der Videobetrachtungsfläche angezeigt wird.

**5.** Das Anzeigesystem nach Anspruch 4, ferner gekennzeichnet dadurch, daß die Videobetrachtungsfläche eine Mehrzahl von durch den Benutzer auswählbaren Bedienelementen enthält, die auf der Anzeige angezeigt werden.

**6.** Das Anzeigesystem nach Anspruch 5, ferner gekennzeichnet dadurch, daß eine Vorschau des ausgewählten audiovisuellen Programms der ausgewählten Darstellung vor dem ausgewählten audiovisuellen Programm angezeigt wird, wobei das ausgewählte audiovisuelle Programm bei einer weiteren Auswahl der ausgewählten Darstellung durch den Benutzer angezeigt wird.

**7.** Das Anzeigesystem nach Anspruch 6, ferner gekennzeichnet dadurch, daß der wenigstens eine der virtuellen Plätze, der dem Benutzer mit einer Mehrzahl der Darstellungen verfügbarer Programme präsentiert wird, in Form einer Wand vorliegt, und daß jede der Mehrzahl von Darstellungen in Form eines auf der Wand befestigten virtuellen Plakats vorliegt.

**8.** Die Anzeige nach Anspruch 7, ferner gekennzeichnet dadurch, daß dann, wenn der Benutzer eines der auf der Wand befestigten Plakate auswählt, das Plakat in einer animierten Form im Vordergrund der virtuellen Welt-Metapher auf der Anzeige angezeigt wird.

**9.** Das Anzeigesystem nach Anspruch 8, ferner gekennzeichnet dadurch, daß das in animierter Form auf der Anzeige angezeigte Plakat ferner zusätzliche Informationen anzeigt, die sich auf die audiovisuelle Darstellung beziehen, auf welche sich das Plakat bezieht.

**10.** Das Anzeigesystem nach Anspruch 9, ferner gekennzeichnet dadurch, daß die anthropomorphe Gestalt bei Auswahl durch einen Benutzer auf der Benutzerschnittstelle so angezeigt wird, daß sie

- in die Form eines Plakats im Vordergrund der virtuellen Welt auf der Anzeige wechselt.
11. Das Anzeigesystem nach Anspruch 10, ferner gekennzeichnet dadurch, daß die anthropomorphe Gestalt, welche in die Form des in animierter Form auf der Anzeige angezeigten Plakats wechselte, zusätzliche Informationen anzeigt, die sich auf die audiovisuelle Darstellung beziehen, auf welche sich das Plakat bezieht. 10
12. Das Anzeigesystem nach Anspruch 11, ferner gekennzeichnet dadurch, daß die auf der Anzeige in der Videobetrachtungsfläche angezeigten Bedienelemente einen durch den Benutzer auswählbaren Lautstärkeinsteller umfassen. 15
13. Das Anzeigesystem nach Anspruch 11, ferner gekennzeichnet dadurch, daß die auf der Anzeige in der Videobetrachtungsfläche angezeigten Bedienelemente eine Mute-Bedieneinstellung umfassen, die durch den Benutzer auswählbar ist. 20
14. Das Anzeigesystem nach Anspruch 11, ferner gekennzeichnet dadurch, daß die auf der Anzeige in der Videobetrachtungsfläche angezeigten Bedienelemente ein Weg-Zurück-Ausgang-Bedienelement umfassen, das durch den Benutzer auswählbar ist, wobei die Auswahl des Weg-Zurück-Ausgangs-Bedienelements dazu führt, daß die Benutzerschnittstelle automatisch den Benutzer zu dem letzten virtuellen Platz navigiert, in welchem sich der Benutzer in der virtuellen Welt befand, bevor der Benutzer die Videobetrachtungsfläche betrat. 25
15. Das Anzeigesystem nach Anspruch 11, ferner gekennzeichnet dadurch, daß die audiovisuelle Quelle einen Video-On-Demand-Server zum Bereitstellen einer Mehrzahl von durch den Benutzer auswählbaren audiovisuellen Programmen für den Empfänger umfaßt. 30
16. Das Anzeigesystem nach Anspruch 15, ferner gekennzeichnet dadurch, daß die audiovisuelle Quelle ferner audiovisuelle Fernsehprogramme für den Empfänger bereitstellt. 45
17. Das Anzeigesystem nach Anspruch 16, ferner gekennzeichnet dadurch, daß die in der Videobetrachtungsfläche angezeigten Bedienelemente ein Video-Kauf-Bedienelement umfassen, das durch den Benutzer für einen Kauf eines durch den Benutzer ausgewählten audiovisuellen Programms auswählbar ist. 50
18. Das Anzeigesystem nach Anspruch 17, ferner gekennzeichnet dadurch, daß das Video-Kauf-Bedienelement durch den Benutzer während der Anzeige einer Vorschau des ausgewählten audiovisuellen Programms in der Videobetrachtungsfläche aktiviert werden kann. 55
19. Das Anzeigesystem nach Anspruch 17, ferner gekennzeichnet dadurch, daß die in der Videobetrachtungsfläche angezeigten Bedienelemente einen Fernsehkanalauswähler umfassen, wobei der Benutzer einen gewünschten Fernsehkanal zur Betrachtung in der Videobetrachtungsfläche unter Verwendung der Eingabeeinrichtung auswählt. 10
20. Das Anzeigesystem nach Anspruch 17, ferner gekennzeichnet dadurch, daß die in der Videobetrachtungsfläche angezeigten Bedienelemente ein Unterbrechungsbedienelement umfassen, wobei die Aktivierung des Unterbrechungsbedienelements durch den Benutzer dazu führt, daß der Video-On-Demand-Server den ausgewählten Video-Kauf durch den das Video-Kauf-Bedienelement benutzenden Benutzer pausiert. 15
21. Das Anzeigesystem nach Anspruch 20, ferner gekennzeichnet dadurch, daß der Video-On-Demand-Server das ausgewählte Video, das von dem Benutzer für eine vorgegebene Zeitdauer gekauft wurde, pausiert. 20
22. Das Anzeigesystem nach Anspruch 21, ferner gekennzeichnet dadurch, daß die Eingabeeinrichtung einen berührungsempfindlichen Bildschirm umfaßt. 25
23. Das Anzeigesystem nach Anspruch 21, ferner gekennzeichnet dadurch, daß die Eingabeeinrichtung eine Fernsteuereinrichtung in Kommunikation mit dem Empfänger umfaßt. 30
24. Ein Verfahren für die Anzeige und Auswahl der Programme in einem Anzeigesystem zur Anzeige audiovisueller Programme, gekennzeichnet durch eine Kombination der Elemente, die die Schritte umfaßt:
- Bereitstellen eines Elements, das eine Schaltung zum Empfangen der audiovisuellen Programme aus einer audiovisuellen Programmquelle enthält; 35
- Bereitstellen einer Benutzerschnittstelle zum Anzeigen der audiovisuellen Programme auf einer Anzeige, wobei die Benutzerschnittstelle eine virtuelle Welt umfaßt, die eine Mehrzahl von virtuellen Plätzen aufweist, die verschiedene Orte in der virtuellen Welt darstellen, wobei wenigstens einer der virtuellen Plätze dem Benutzer eine Mehrzahl von Darstellungen verfügbarer audiovisueller Programme zum Anzeigen auf der Anzeige präsentiert, und wobei ferner die virtuellen Plätze derart angeordnet

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| <p>sind, daß alle virtuellen Plätze in Bezug zueinander innerhalb der virtuellen Welt verteilt angeordnet sind;</p> <p>Bereitstellen eines Elements für eine Interaktion mit den virtuellen Plätzen unter Verwendung einer Benutzereingabeeinrichtung, wobei die Interaktion es einem Benutzer ermöglicht, ein gewünschtes audiovisuelles Programm derart auszuwählen, daß die Auswahl dazu führt, daß das ausgewählte audiovisuelle Programm auf der Anzeige angezeigt wird;</p> <p>Ermöglichen einem Benutzer, zwischen den virtuellen Plätzen in der virtuellen Welt zu navigieren,</p> <p>wobei die Benutzerschnittstelle ferner eine anthropomorphe Gestalt enthält, welche sich innerhalb der virtuellen Welt in einer animierten Art und Weise zwischen den virtuellen Plätzen bewegt.</p> | <p>Darstellungen verfügbarer Programme präsentiert, in Form einer Wand vorliegt, und daß jede der Mehrzahl von Darstellungen in Form eines auf der Wand angeordneten virtuellen Plakats vorliegt.</p> <p>5</p> <p>31. Das Verfahren nach Anspruch 30, ferner gekennzeichnet dadurch, daß dann, wenn der Benutzer eines der auf der Wand angeordneten Plakate auswählt, das Plakat in einer animierten Form in einem Vordergrund der virtuellen Welt auf der Anzeige angezeigt wird.</p> <p>10</p> <p>32. Das Verfahren nach Anspruch 31, ferner gekennzeichnet dadurch, daß das in animierter Form auf der Anzeige angezeigte Plakat ferner zusätzliche Informationen anzeigt, die sich auf die audiovisuelle Darstellung beziehen, auf welche sich das Plakat bezieht.</p> <p>15</p> <p>33. Das Verfahren nach Anspruch 31, ferner gekennzeichnet dadurch, daß die anthropomorphe Gestalt bei Auswahl durch einen Benutzer auf der Benutzerschnittstelle so dargestellt wird, daß sie in die Form eines Plakats im Vordergrund der virtuellen Welt auf der Anzeige wechselt.</p> <p>20</p> <p>34. Das Verfahren nach Anspruch 33, ferner gekennzeichnet dadurch, daß die anthropomorphe Gestalt, welche in die Form des auf der Anzeige in animierter Form angezeigten Plakats wechselte, ferner zusätzliche Informationen anzeigt, welche sich auf die audiovisuelle Darstellung beziehen, auf welche sich das Plakat bezieht.</p> <p>25</p> <p>35. Das Verfahren nach Anspruch 28, ferner umfassend den Schritt des Anzeigens eines von dem Benutzer auswählbaren Lautstärkeinstellbedienelements als eines der auf der Anzeige in der Videobetrachtungsfläche angezeigten Bedienelemente.</p> <p>30</p> <p>36. Das Verfahren nach Anspruch 28, ferner umfassend den Schritt des Anzeigens eines durch den Benutzer auswählbaren Mute-Einstellbedienelements als eines der auf der Anzeige in der Videobetrachtungsfläche angezeigten Bedienelemente.</p> <p>35</p> <p>37. Das Verfahren nach Anspruch 28, ferner umfassend den Schritt des Anzeigens der auf der Anzeige in der Videobetrachtungsfläche angezeigten Bedienelemente einschließlich eines durch den Benutzer auswählbaren Weg-Zurück-Ausgang-Bedienelements, wobei die Auswahl des Weg-Zurück-Ausgang-Bedienelements dazu führt, daß die Benutzerschnittstelle automatisch den Benutzer zu dem letzten virtuellen Platz navigiert, an welchem der Benutzer in der virtuellen Welt sich aufhielt, bevor der Benutzer in die Videobetrachtungsfläche eintrat.</p> <p>40</p> <p>45</p> <p>50</p> <p>55</p> |
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38. Das Verfahren nach Anspruch 28, ferner gekennzeichnet dadurch, daß die audiovisuelle Quelle einen Video-On-Demand-Server zum Bereitstellen einer Mehrzahl von durch den Benutzer auswählbaren audiovisuellen Programmen an den Empfänger umfaßt.
39. Das Verfahren nach Anspruch 38, ferner gekennzeichnet dadurch, daß die audiovisuelle Quelle darüber hinaus audiovisuelle Fernsehprogramme an den Empfänger bereitstellt.
40. Das Verfahren nach Anspruch 39, ferner umfassend den Schritt des Anzeigens eines durch den Benutzer auswählbaren Video-Kauf-Bedienelements zum Kaufen eines durch den Benutzer ausgewählten audiovisuellen Programms als eines der in der Videobetrachtungsfläche angezeigten Bedienelemente.
41. Das Verfahren nach Anspruch 40, ferner gekennzeichnet dadurch, daß das Video-Kauf-Bedienelement durch den Benutzer während der Anzeige einer Vorschau des ausgewählten audiovisuellen Programms in der Videobetrachtungsfläche aktiviert werden kann.
42. Das Verfahren nach Anspruch 41, ferner umfassend den Schritt des Anzeigens eines Fernsehkanalauswählers, wobei der Benutzer einen gewünschten Fernsehkanal zur Betrachtung in der Videobetrachtungsfläche unter Verwendung der Eingabeeinrichtung auswählt.
43. Das Verfahren nach Anspruch 42, ferner umfassend den Schritt des Anzeigens eines Unterbrechungsbedienelements, wobei die Aktivierung des Unterbrechungsbedienelements durch den Benutzer dazu führt, daß der Video-On-Demand-Server das von dem Benutzer unter Verwendung des Video-Kauf-Bedienelements gekaufte ausgewählte Video pausiert.
44. Das Verfahren nach Anspruch 43, ferner gekennzeichnet dadurch, daß der Video-On-Demand-Server das von dem Benutzer für eine vorgegebene Zeitdauer gekaufte ausgewählte Video bei Aktivierung des Unterbrechungsbedienelements pausiert.
45. Das Verfahren nach Anspruch 44, ferner gekennzeichnet dadurch, daß die Eingabeeinrichtung einen berührungsempfindlichen Bildschirm umfaßt.
46. Das Verfahren nach Anspruch 44, ferner gekennzeichnet dadurch, daß die Eingabeeinrichtung eine Fernsteuereinrichtung in Kommunikation mit dem Empfänger umfaßt.
47. Das Anzeigesystem nach Anspruch 1, ferner gekennzeichnet dadurch, daß der Empfänger eine Set-top-Box mit einer Schaltung zum Empfangen der Videoprogramme aus einem Video-Server umfaßt.
48. Das Anzeigesystem nach Anspruch 47, ferner gekennzeichnet dadurch, daß die anthropomorphe Gestalt ein Extra ist, das durch einen kommerziellen Inhalt zur Verfügung stellende anthropomorphe Gestalt dargestellt wird.
49. Das Anzeigesystem nach Anspruch 48, gekennzeichnet durch eine Kombination von Elementen, die einschließt, daß das Extra bei Aktivierung durch den Benutzer unter Verwendung der Eingabeeinrichtung eine Darstellung eines durch den Benutzer auswählbaren zusätzlichen audiovisuellen Programms anzeigt.
50. Das Anzeigesystem nach Anspruch 48, ferner gekennzeichnet dadurch, daß das Extra bei Auswahl durch einen Benutzer auf der Schnittstelle als in die Form eines audiovisuellen Darstellungen anzeigenden virtuellen Plakats im Vordergrund der virtuellen Welt auf der Anzeige wechselnd angezeigt wird.
51. Das Anzeigesystem nach Anspruch 52, gekennzeichnet durch eine Kombination von Elementen, die einschließen, daß das Extra, welche in die Form des in animierter Form auf der Anzeige angezeigten Plakat wechselt, ferner zusätzliche Informationen anzeigt, die sich auf die audiovisuelle Darstellung beziehen, auf welche sich das Plakat bezieht.
52. Das Verfahren nach Anspruch 24, ferner gekennzeichnet dadurch, daß das Bereitstellen eines die Schaltung umfassenden Elements das Bereitstellen einer Set-top-Box umfaßt.
53. Das Verfahren nach Anspruch 52, ferner gekennzeichnet dadurch, daß die anthropomorphe Gestalt ein Extra ist, das durch einen kommerziellen Inhalt zur Verfügung stellende anthropomorphe Gestalt dargestellt wird.
54. Das Verfahren nach Anspruch 53, ferner gekennzeichnet dadurch, daß das Extra bei seiner Aktivierung durch den Benutzer unter Verwendung der Eingabeeinrichtung ein Plakat eines zusätzlichen durch den Benutzer auswählbaren Videoprogramms anzeigt.
55. Das Verfahren nach Anspruch 54, ferner gekennzeichnet dadurch, daß das Extra bei Auswahl durch einen Benutzer auf der Schnittstelle so angezeigt wird, daß es in die Form eines virtuellen Plakats im

Vordergrund der virtuellen Welt auf der Anzeige wechselt.

- 56. Das Verfahren nach Anspruch 55, gekennzeichnet durch eine Kombination von Elementen, die umfaßt, daß das Extra, welches in die Form des in animierter Form auf der Anzeige angezeigten Plakats wechselte, ferner zusätzliche Informationen anzeigt, die sich auf das Videoprogramm beziehen, auf welches sich das Plakat bezieht.**

#### Revendications

- 1. Système d'affichage pour l'affichage d'une programmation audiovisuelle, caractérisé par une combinaison d'éléments comprenant :**

- un récepteur possédant un circuit de réception de ladite programmation audiovisuelle à partir d'une source de programme audiovisuel ;
- une interface d'utilisateur pour l'affichage de ladite programmation audiovisuelle sur un affichage, ladite interface d'utilisateur comprenant un monde virtuel possédant une pluralité de sites virtuels représentant diverses positions dans ledit monde virtuel, dans laquelle au moins un desdits sites virtuels présente audit utilisateur une pluralité de représentations de programmation audiovisuelle disponible pour un affichage sur ledit affichage et dans laquelle lesdits sites virtuels sont agencés, de plus, de telle que chacun desdits sites virtuels soit disposé l'un par rapport à l'autre dans ledit monde virtuel ;
- un dispositif d'entrée d'utilisateur pour permettre à un utilisateur d'interagir avec lesdits sites virtuels, ladite interaction permettant audit utilisateur de sélectionner un programme audiovisuel désiré de telle façon que ladite sélection entraîne un affichage dudit programme audiovisuel sélectionné sur ledit affichage ; et
- un élément permettant audit utilisateur de naviguer entre lesdits sites virtuels dans ledit monde virtuel ;

dans lequel ladite interface d'utilisateur comprend, de plus, un caractère anthropomorphique se déplaçant dans ledit monde virtuel, de façon animée, entre lesdits sites virtuels.

- 2. Système d'affichage selon la revendication 1, caractérisé, de plus, en ce que ledit caractère anthropomorphique, lors d'une activation par ledit utilisateur à l'aide dudit dispositif d'entrée, affiche une re-**

présentation d'un programme audiovisuel additionnel pouvant être sélectionné par ledit utilisateur.

- 3. Système d'affichage selon la revendication 1 ou 2, caractérisé, de plus, en ce que, lors de la sélection d'une desdites représentations par ledit utilisateur à l'aide dudit dispositif d'entrée, ladite interface d'utilisateur affiche un espace de visualisation vidéo sur ledit affichage.**
- 4. Système d'affichage selon la revendication 3, caractérisé, de plus, en ce que ledit programme audiovisuel correspondant à ladite représentation sélectionnée est affiché pour une visualisation par ledit utilisateur dans ledit espace de visualisation vidéo.**
- 5. Système d'affichage selon la revendication 4, caractérisé, de plus, en ce que ledit espace de visualisation vidéo comprend une pluralité de commandes pouvant être sélectionnées par l'utilisateur, affichées sur ledit affichage.**
- 6. Système d'affichage selon la revendication 5, caractérisé, de plus, en ce que une prévisualisation dudit programme audiovisuel sélectionné de ladite représentation sélectionnée est affichée avant ledit programme audiovisuel sélectionné, ledit programme audiovisuel sélectionné étant affiché lors d'une sélection supplémentaire de ladite représentation sélectionnée par ledit utilisateur.**
- 7. Système d'affichage selon la revendication 6, caractérisé, de plus, en ce que ledit au moins un desdits sites virtuels présentés audit utilisateur selon une pluralité desdites représentations de programmation disponible se présente sous la forme d'un mur et chaque représentation de ladite pluralité de représentations est sous la forme d'une Affiche virtuelle disposée sur ledit mur.**
- 8. Système d'affichage selon la revendication 7, caractérisé, de plus, en ce que, lors de la sélection d'une desdites Affiches disposées sur ledit mur par ledit utilisateur, ladite Affiche est affichée sous une forme animée dans un premier plan de ladite représentation imagée de monde virtuel sur ledit affichage.**
- 9. Système d'affichage selon la revendication 8, caractérisé, de plus, en ce que ladite Affiche affichée sous une forme animée sur ledit affichage affiche, de plus, une information additionnelle concernant la représentation audiovisuelle attenante à ladite Affiche.**
- 10. Système d'affichage selon la revendication 9, caractérisé, de plus, en ce que ledit caractère anthropomorphique, lors d'une sélection par un utilisateur,**

- est affiché sur ladite interface comme prenant la forme d'une Affiche dans le premier plan dudit monde virtuel sur ledit affichage.
- 11.** Système d'affichage selon la revendication 10, caractérisé, de plus, en ce que ledit caractère anthropomorphique ayant pris la forme de ladite Affiche affichée sous forme animée sur ledit affichage affiche, de plus, une information additionnelle concernant la représentation audiovisuelle à laquelle a trait ladite Affiche.
- 12.** Système d'affichage selon la revendication 11, caractérisé, de plus, en ce que lesdites commandes affichées sur ledit affichage dudit espace de visualisation vidéo comprennent une commande de réglage de volume pouvant être sélectionnée par ledit utilisateur.
- 13.** Système d'affichage selon la revendication 11, caractérisé, de plus, en ce que lesdites commandes affichées sur ledit affichage dudit espace de visualisation vidéo comprennent un réglage de commande de coupure du son pouvant être sélectionné par ledit utilisateur.
- 14.** Système d'affichage selon la revendication 11, caractérisé, de plus, en ce que lesdites commandes affichées sur ledit affichage dudit espace de visualisation vidéo comprennent une commande de sortie de Retour pouvant être sélectionnée par l'utilisateur, la sélection de ladite commande de sortie de Retour entraînant un déplacement automatique par ladite interface d'utilisateur dudit utilisateur vers le dernier site virtuel dans lequel ledit utilisateur était situé dans ledit monde virtuel avant l'entrée dudit utilisateur dans ledit espace de visualisation vidéo.
- 15.** Système d'affichage selon la revendication 11, caractérisé, de plus, en ce que ladite source audiovisuelle comprend un serveur vidéo à la demande pour fournir une pluralité de programmes audiovisuels pouvant être sélectionnés par l'utilisateur audit récepteur.
- 16.** Système d'affichage selon la revendication 15, caractérisé, de plus, en ce que ladite source audiovisuelle fournit, de plus, une programmation audiovisuelle de télévision audit récepteur.
- 17.** Système d'affichage selon la revendication 16, caractérisé, de plus, en ce que lesdites commandes affichées dans ledit espace de visualisation vidéo comprennent une commande d'acquisition vidéo pouvant être sélectionnée par ledit utilisateur pour acquérir un programme audiovisuel sélectionné par ledit utilisateur.
- 18.** Système d'affichage selon la revendication 17, caractérisé, de plus, en ce que ladite commande d'acquisition vidéo peut être activée par ledit utilisateur lors de l'affichage d'une prévisualisation dudit programme audiovisuel sélectionné dans ledit espace de visualisation vidéo.
- 19.** Système d'affichage selon la revendication 17, caractérisé, de plus, en ce que lesdites commandes affichées dans ledit espace de visualisation vidéo comprennent un sélecteur de canal de télévision, ledit utilisateur sélectionnant un canal de télévision désiré pour une visualisation dans ledit espace de visualisation vidéo à l'aide dudit dispositif d'entrée.
- 20.** Système d'affichage selon la revendication 17, caractérisé, de plus, en ce que lesdites commandes affichées dans ledit espace de visualisation vidéo comprennent une commande d'intermission, l'activation de ladite commande d'intermission par ledit utilisateur entraînant une interruption de ladite acquisition vidéo sélectionnée dans ledit serveur vidéo à la demande par ledit utilisateur à l'aide de ladite commande d'acquisition vidéo.
- 21.** Système d'affichage selon la revendication 20, caractérisé, de plus, en ce que ledit serveur vidéo à la demande interrompt ladite vidéo sélectionnée acquise par ledit utilisateur pendant un temps prédéterminé.
- 22.** Système d'affichage selon la revendication 21, caractérisé, de plus, en ce que ledit dispositif d'entrée comprend un écran à touches sensibles.
- 23.** Système d'affichage selon la revendication 21, caractérisé, de plus, en ce que ledit dispositif d'entrée comprend un dispositif de commande à distance en communication avec ledit récepteur.
- 24.** Procédé pour l'affichage et la sélection de ladite programmation dans un système d'affichage pour l'affichage d'une programmation audiovisuelle, caractérisé par une combinaison d'éléments comprenant les étapes suivantes :
- la prévision d'un élément comprenant un circuit pour la réception de ladite programmation audiovisuelle à partir d'une source de programme audiovisuel ;
  - la prévision d'une interface d'utilisateur pour un affichage de ladite programmation audiovisuelle sur un affichage, ladite interface d'utilisateur comprenant un monde virtuel possédant une pluralité de sites virtuels représentant diverses positions dans ledit monde virtuel, dans laquelle au moins un desdits sites virtuels présente

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|    | audit utilisateur une pluralité de représentations de programmation audiovisuelle disponible pour un affichage sur ledit affichage, et dans laquelle lesdits sites virtuels sont agencés, de plus, de telle façon que chacun desdits sites virtuels soit disposé l'un par rapport à l'autre dans ledit monde virtuel ;   |    |   |
| -  | la prévision d'un élément pour interagir avec lesdits sites virtuels à l'aide d'un dispositif d'entrée d'utilisateur, ladite interaction permettant à un utilisateur de sélectionner un programme audiovisuel désiré de telle façon que ladite sélection entraîne un affichage dudit programme audiovisuel sélectionné sur ledit affichage ;   | 5  | 30. Procédé selon la revendication 29, caractérisé, de plus, en ce que ledit au moins un desdits sites virtuels présentés audit utilisateur selon une pluralité desdites représentations de programmation disponible se présente sous la forme d'un mur et chaque représentation de ladite pluralité de représentations est sous la forme d'une Affiche virtuelle disposée sur ledit mur. |
| -  | la capacité dudit utilisateur à naviguer entre lesdits sites virtuels dans ledit monde virtuel ;   | 10 | 31. Procédé selon la revendication 30, caractérisé, de plus, en ce que, lors de la sélection d'une desdites Affiches disposées sur ledit mur par ledit utilisateur, ladite Affiche est affichée sous une forme animée dans un premier plan dudit monde virtuel sur ledit affichage.   |
|    | selon lequel ladite interface d'utilisateur comprend, de plus, un caractère anthropomorphique se déplaçant dans ledit monde virtuel, d'une façon animée, entre lesdits sites virtuels.   | 15 | 32. Procédé selon la revendication 31, caractérisé, de plus, en ce que ladite Affiche affichée sous une forme animée sur ledit affichage affiche, de plus, une information additionnelle concernant la représentation audiovisuelle attenante à ladite Affiche.   |
| 25 | 25. Procédé selon la revendication 24, caractérisé, de plus, en ce que ledit caractère anthropomorphique, lors d'une activation par ledit utilisateur à l'aide dudit dispositif d'entrée, affiche une représentation d'un programme audiovisuel additionnel pouvant être sélectionné par ledit utilisateur.  | 20 | 33. Procédé selon la revendication 31, caractérisé, de plus, en ce que ledit caractère anthropomorphique, lors d'une sélection par un utilisateur, est affiché sur ladite interface comme prenant la forme d'une Affiche dans le premier plan dudit monde virtuel sur ledit affichage.  |
| 26 | 26. Procédé selon la revendication 24 ou 25, caractérisé, de plus, en ce que, lors de la sélection d'une desdites représentations par ledit utilisateur à l'aide dudit dispositif d'entrée, ladite interface d'utilisateur affiche un espace de visualisation vidéo sur ledit affichage.   | 25 | 34. Procédé selon la revendication 33, caractérisé, de plus, en ce que ledit caractère anthropomorphique ayant pris la forme de ladite Affiche affichée sous forme animée sur ledit affichage affiche, de plus, une information additionnelle concernant la représentation audiovisuelle à laquelle a trait ladite Affiche.   |
| 27 | 27. Procédé selon la revendication 26, caractérisé, de plus, en ce que ledit programme audiovisuel correspondant à ladite représentation sélectionnée est affiché pour une visualisation par ledit utilisateur dans ledit espace de visualisation vidéo.   | 30 | 35. Procédé selon la revendication 28, comprenant, de plus, étape d'affichage d'une commande de réglage de volume pouvant être sélectionnée par ledit utilisateur comme une desdites commandes affichées sur ledit affichage dudit espace de visualisation vidéo.   |
| 28 | 28. Procédé selon la revendication 27, comprenant, de plus, une étape d'affichage dans ledit espace de visualisation vidéo d'une pluralité de commandes pouvant être sélectionnées par l'utilisateur, affichées sur ledit affichage.   | 35 | 36. Procédé selon la revendication 28, comprenant, de plus, une étape d'affichage d'un réglage de commande de coupure du son pouvant être sélectionné par ledit utilisateur comme une desdites commandes affichées sur ledit affichage dudit espace de visualisation vidéo.   |
| 29 | 29. Procédé selon la revendication 28, comprenant, de plus, une étape d'affichage d'une prévisualisation dudit programme audiovisuel sélectionné de ladite représentation sélectionnée avant ledit programme audiovisuel sélectionné, ledit programme audiovisuel sélectionné étant affiché lors d'une sélection supplémentaire de ladite représentation sélectionnée par ledit utilisateur. | 40 | 37. Procédé selon la revendication 28, comprenant une étape d'affichage desdites commandes affichées sur ledit affichage dudit espace de visualisation vidéo comprenant une commande de sortie de Retour pouvant être sélectionnée par l'utilisateur, la sélection de ladite commande de sortie de Retour entraînant un déplacement automatique par ladite                                |
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- interface d'utilisateur dudit utilisateur vers le dernier site virtuel dans lequel ledit utilisateur était situé dans ledit monde virtuel avant l'entrée dudit utilisateur dans ledit espace de visualisation vidéo.
38. Procédé selon la revendication 28, caractérisé, de plus, en ce que ladite source audiovisuelle comprend un serveur vidéo à la demande pour fournir une pluralité de programmes audiovisuels pouvant être sélectionnés par l'utilisateur audit récepteur.
39. Procédé selon la revendication 38, caractérisé, de plus, en ce que ladite source audiovisuelle fournit, de plus, une programmation audiovisuelle de télévision audit récepteur.
40. Procédé selon la revendication 39, comprenant, de plus, une étape d'affichage d'une commande d'acquisition vidéo pouvant être sélectionnée par ledit utilisateur pour acquérir un programme audiovisuel sélectionné par ledit utilisateur comme une desdites commandes affichées dans ledit espace de visualisation vidéo.
41. Procédé selon la revendication 40, caractérisé, de plus, en ce que ladite commande d'acquisition vidéo peut être activée par ledit utilisateur lors de l'affichage d'une prévisualisation dudit programme audiovisuel sélectionné dans ledit espace de visualisation vidéo.
42. Procédé selon la revendication 41, comprenant, de plus, une étape d'affichage d'un sélecteur de canal de télévision, ledit utilisateur sélectionnant un canal de télévision désiré pour une visualisation dans ledit espace de visualisation vidéo à l'aide dudit dispositif d'entrée.
43. Procédé selon la revendication 42, comprenant, de plus, une étape d'affichage d'une commande d'intermission, l'activation de ladite commande d'intermission par ledit utilisateur entraînant une interruption de ladite acquisition vidéo sélectionnée dans ledit serveur vidéo à la demande acquise par ledit utilisateur à l'aide de ladite commande d'acquisition vidéo.
44. Procédé selon la revendication 43, caractérisé, de plus, en ce que ledit serveur vidéo à la demande interrompt ladite vidéo sélectionnée acquise par ledit utilisateur pendant un temps prédéterminé lors de l'activation de ladite commande d'intermission.
45. Procédé selon la revendication 44, caractérisé, de plus, en ce que ledit dispositif d'entrée comprend un écran à touches sensibles.
46. Procédé selon la revendication 44, caractérisé, de plus, en ce que ledit dispositif d'entrée comprend un dispositif de commande à distance en communication avec ledit récepteur.
- 5 47. Système d'affichage selon la revendication 1, caractérisé, de plus, en ce que ledit récepteur comprend un démodulateur numérique comprenant un circuit pour la réception de ladite programmation vidéo à partir d'un serveur vidéo.
- 10 48. Système d'affichage selon la revendication 47, caractérisé, de plus, en ce que ledit caractère anthropomorphe est un Figurant représenté par un caractère anthropomorphe à contenu commercial.
- 15 49. Système d'affichage selon la revendication 48, caractérisé en ce qu'une combinaison d'éléments comprenant ledit Figurant lors d'une activation par ledit utilisateur à l'aide dudit dispositif d'entrée, affiche une représentation d'un programme audiovisuel additionnel pouvant être sélectionné par ledit utilisateur.
- 20 50. Système d'affichage selon la revendication 48, caractérisé, de plus, en ce que ledit Figurant, lors d'une sélection par un utilisateur, est affiché sur ladite interface comme prenant la forme d'une Affiche virtuelle affichant une représentation audiovisuelle dans le premier plan dudit monde virtuel sur ledit affichage.
- 25 51. Système d'affichage selon la revendication 52, caractérisé en ce qu'une combinaison d'éléments comprenant ledit Figurant ayant pris la forme de ladite Affiche affichée sous forme animée sur ledit affichage affiche, de plus, une information additionnelle concernant la représentation audiovisuelle à laquelle a trait ladite Affiche.
- 30 35 52. Procédé selon la revendication 24, caractérisé, de plus, en ce que la prévision d'un élément comprenant le circuit comprend la prévision d'un démodulateur numérique.
- 40 53. Procédé selon la revendication 52, caractérisé, de plus, en ce que ledit caractère anthropomorphe est un Figurant représenté par un caractère anthropomorphe à contenu commercial.
- 45 54. Procédé selon la revendication 53, caractérisé, de plus, en ce que ledit Figurant, lors d'une activation par ledit utilisateur à l'aide dudit dispositif d'entrée, affiche une Affiche d'un programme vidéo additionnel pouvant être sélectionné par ledit utilisateur.
- 50 55. Procédé selon la revendication 54, caractérisé, de plus, en ce que ledit Figurant, lors d'une sélection par un utilisateur, est affiché sur ladite interface

comme prenant la forme d'une Affiche virtuelle dans le premier plan dudit monde virtuel sur ledit affichage.

56. Procédé selon la revendication 55, caractérisé, de plus, en ce qu'une combinaison d'éléments comprenant ledit Figurant ayant pris la forme de ladite Affiche affichée sous forme animée sur ledit affichage affiche, de plus, une information additionnelle concernant le programme vidéo auquel a trait ladite Affiche. 10

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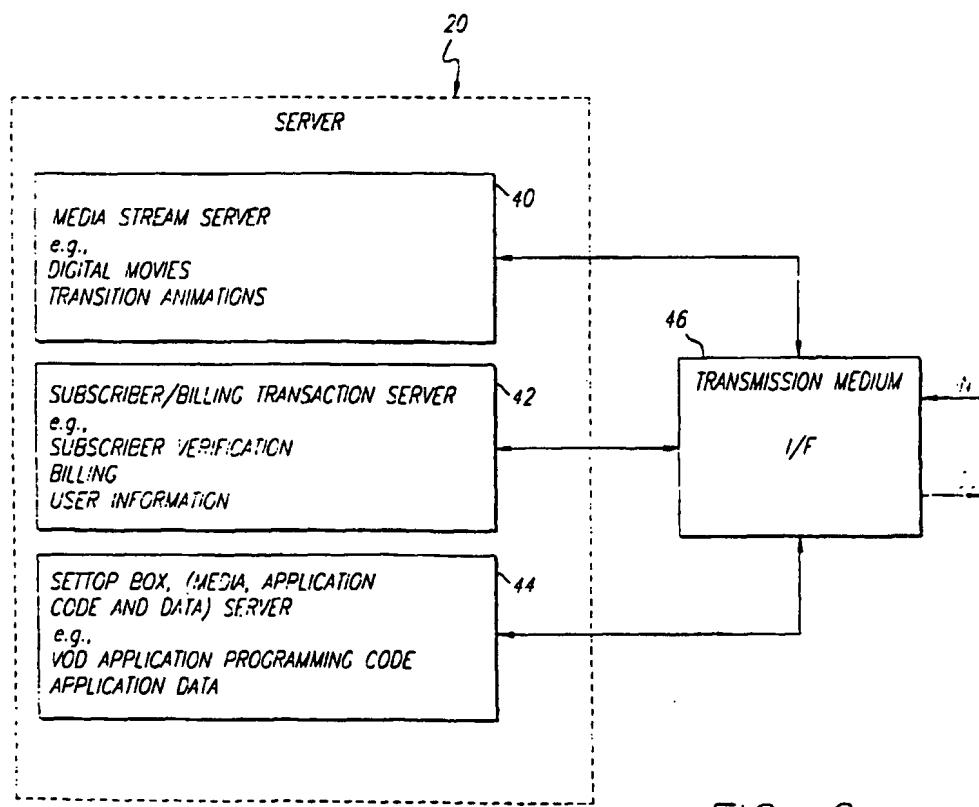
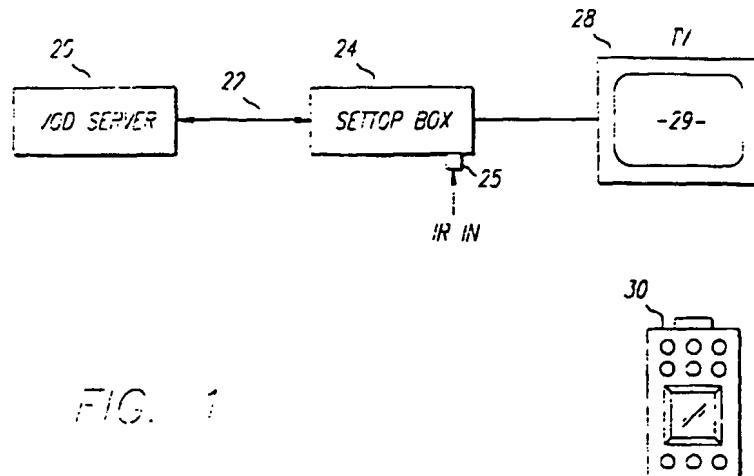
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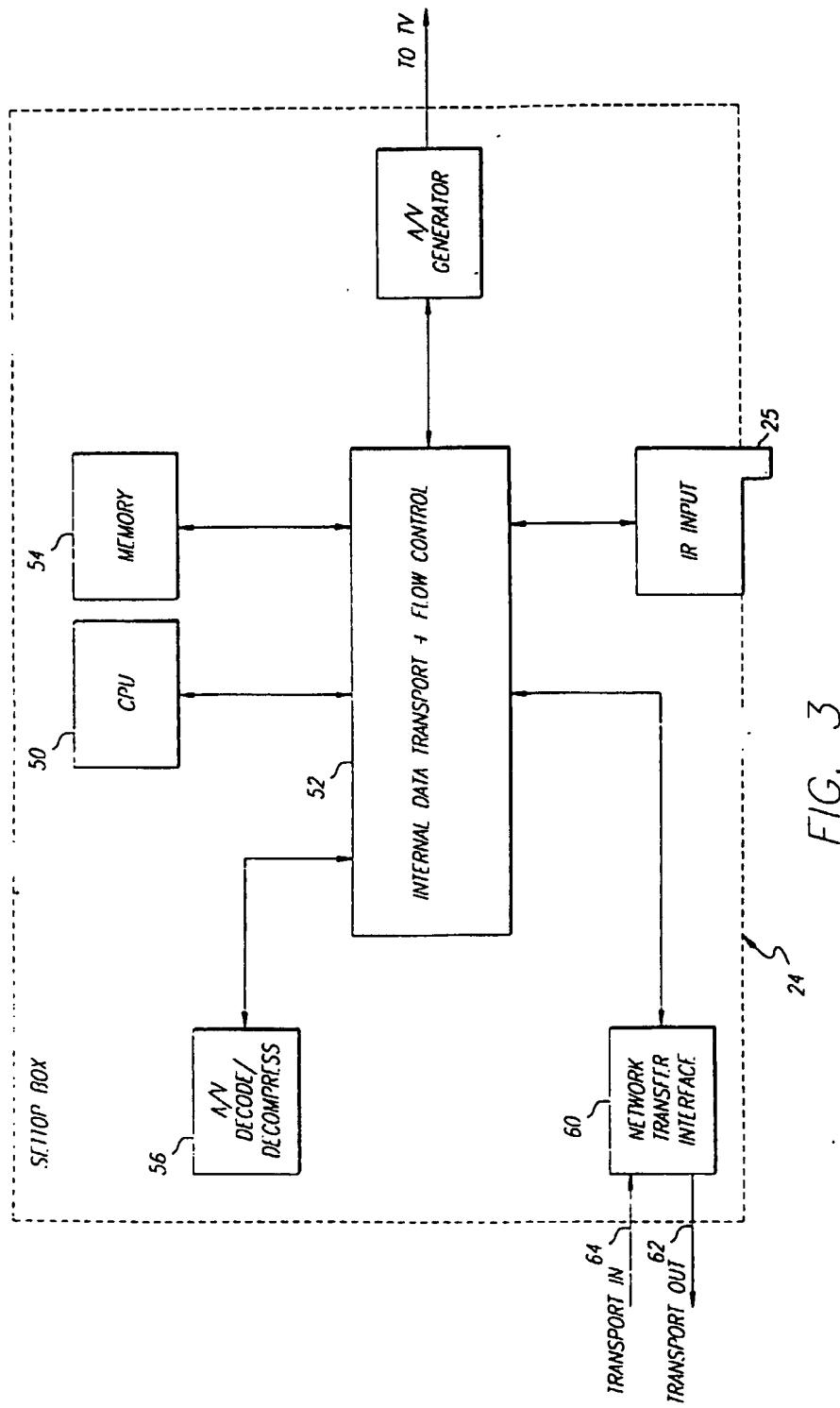


FIG. 3

FIG. 4

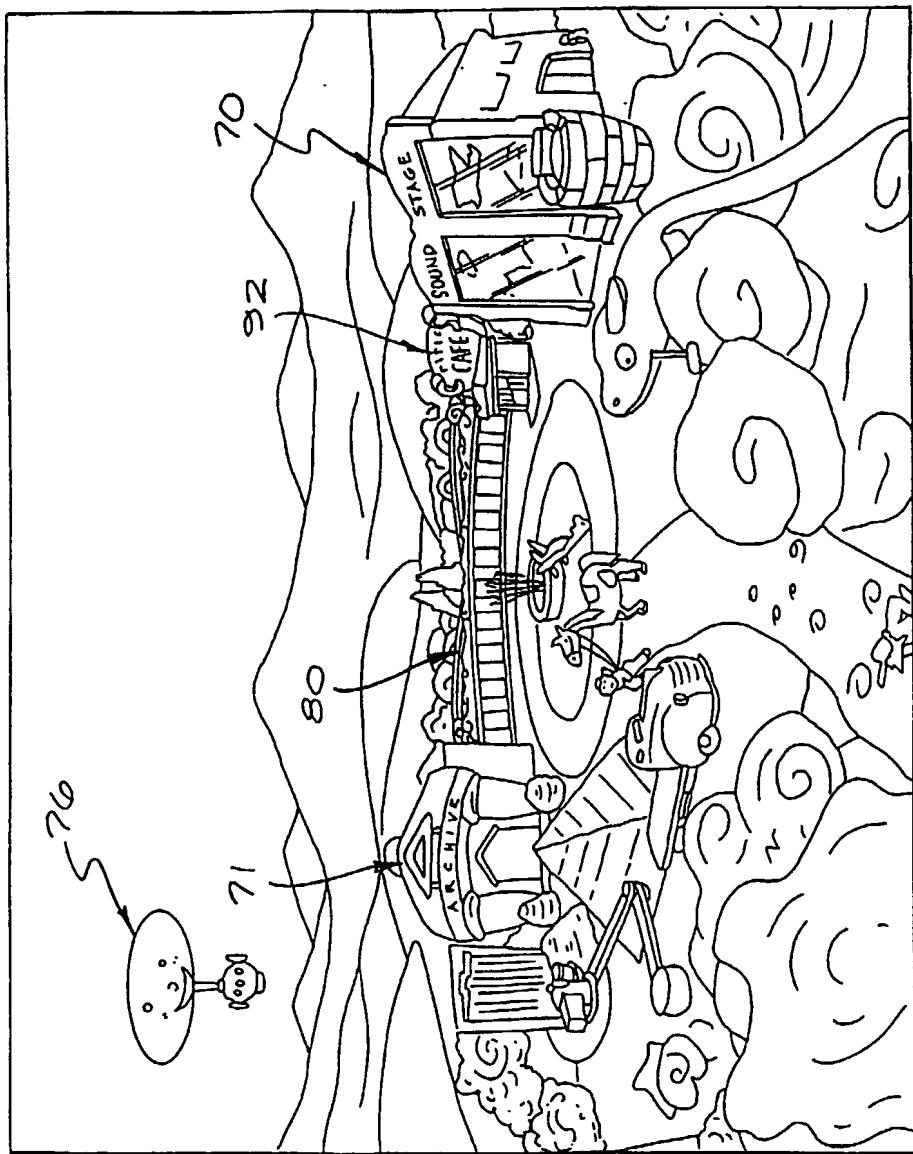


FIG. 5

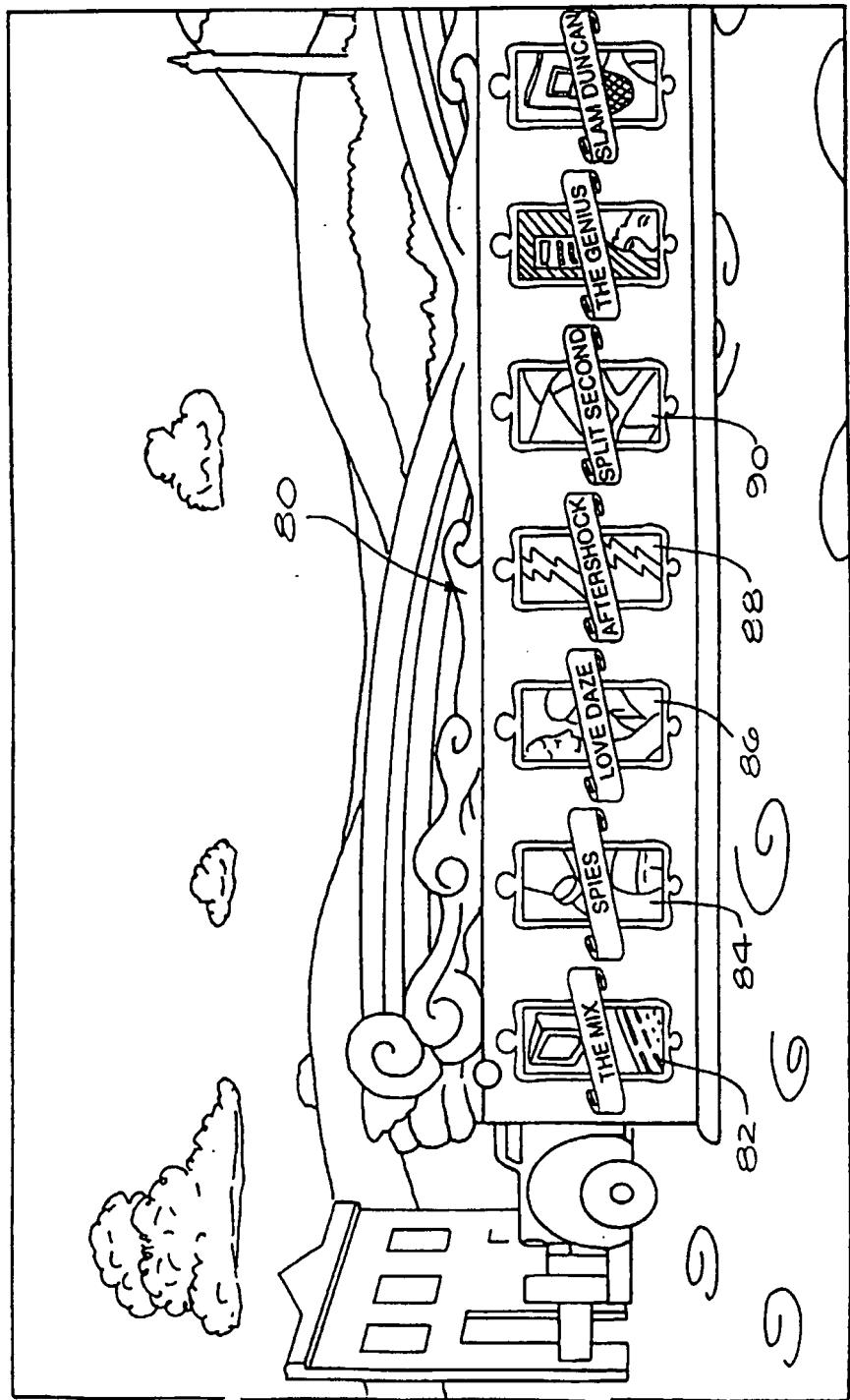


FIG. 6

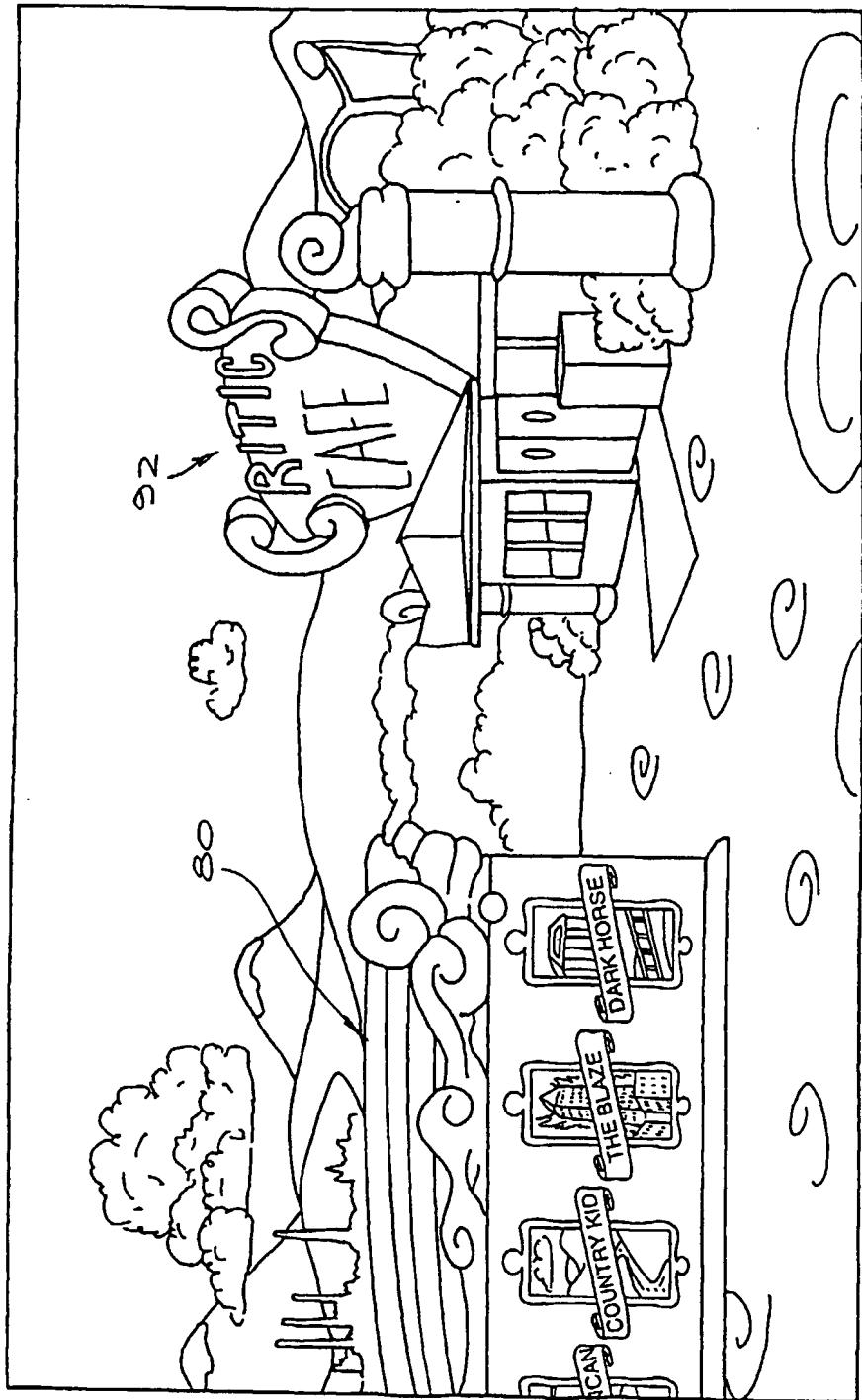


FIG. 7

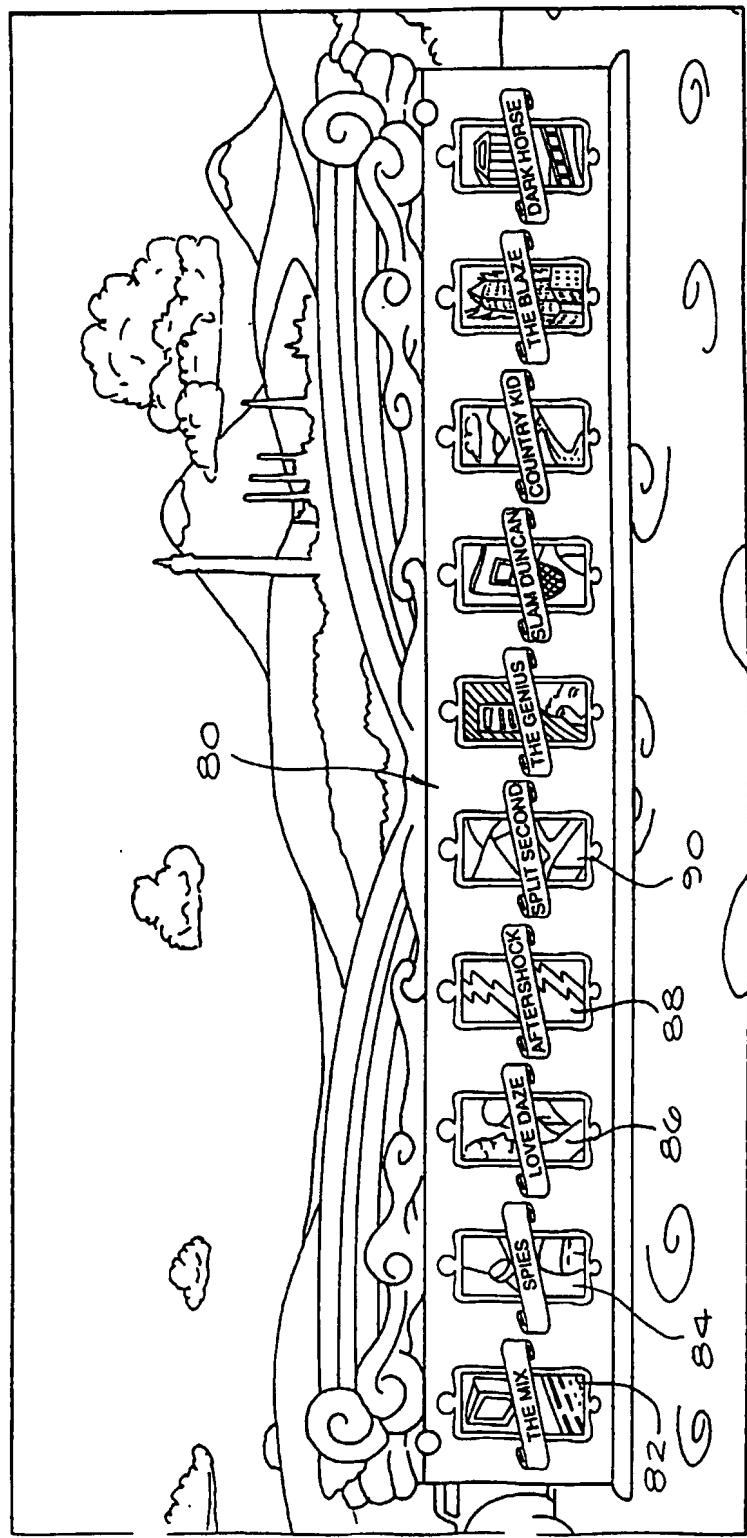


FIG. 8

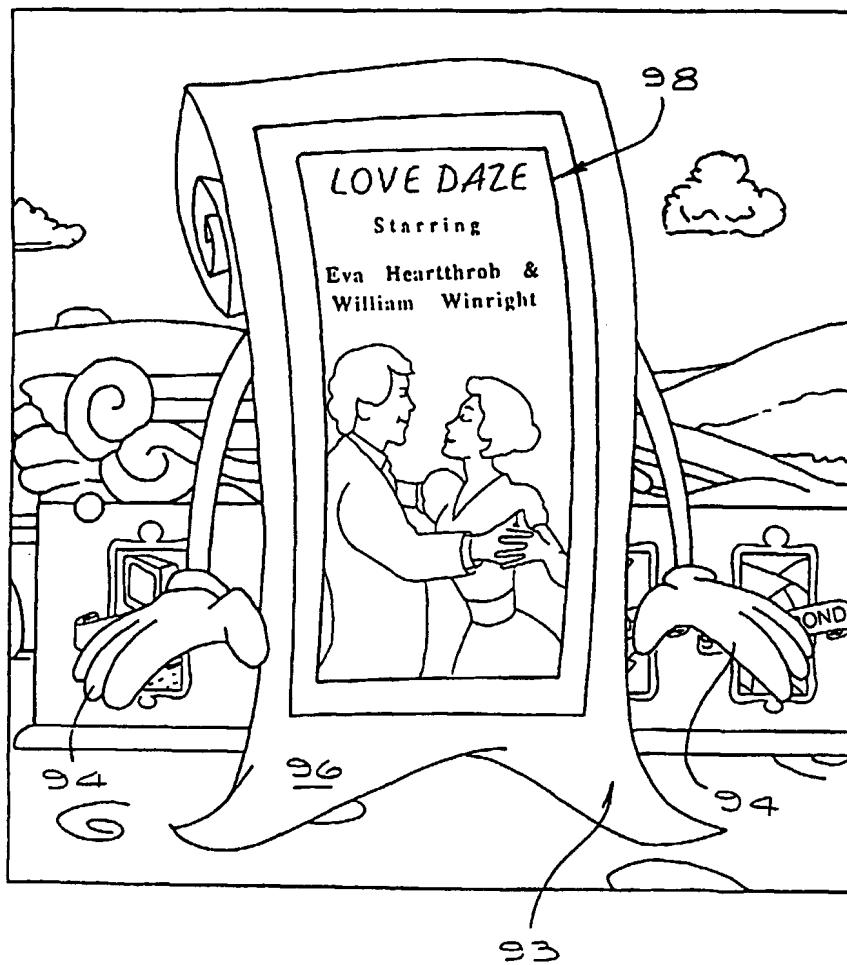


FIG. 9

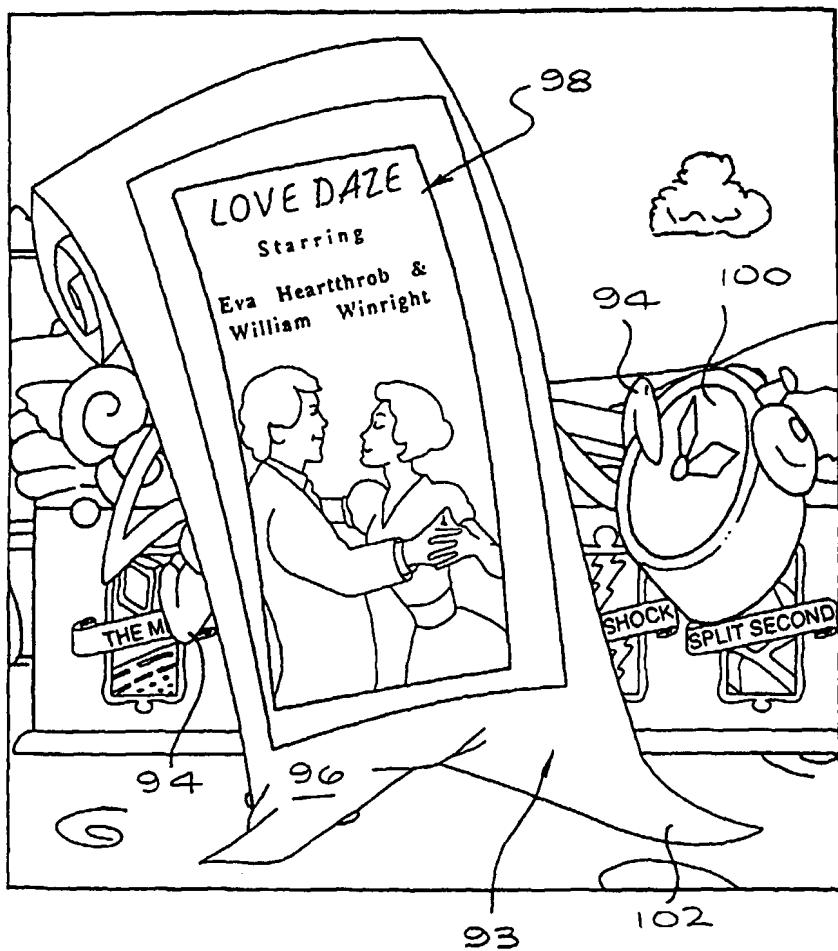


FIG.10

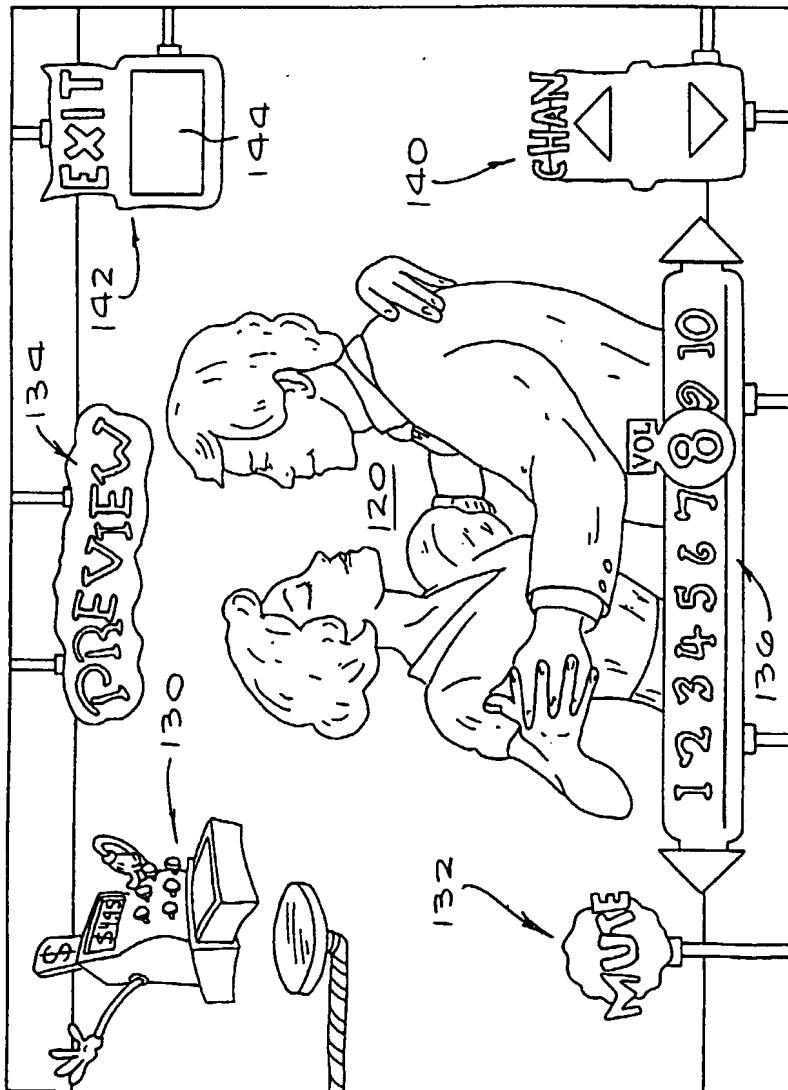


FIG.11

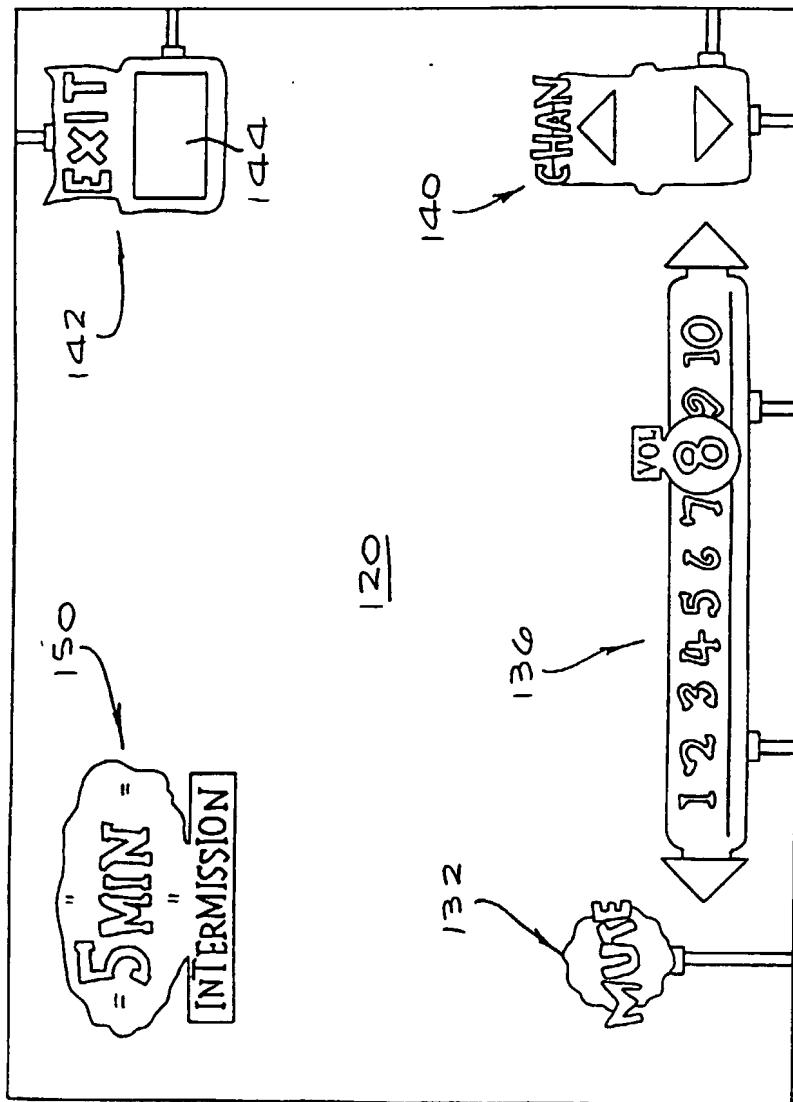


FIG.12

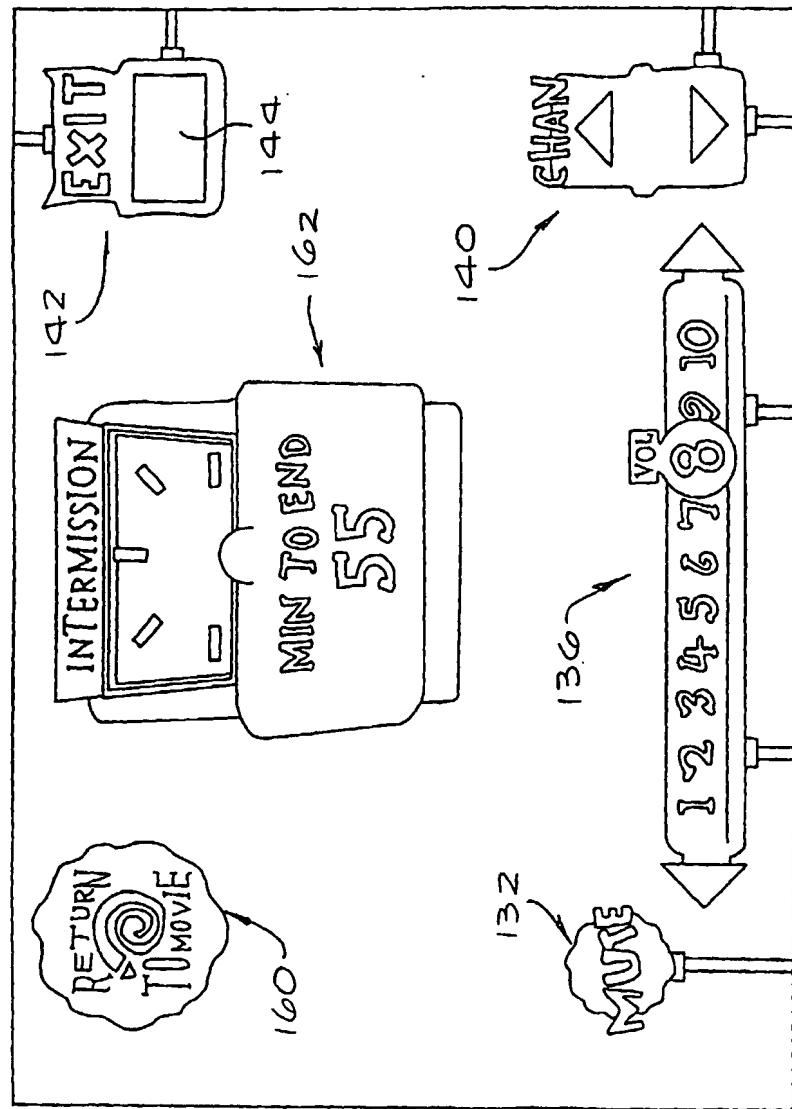


FIG. 13

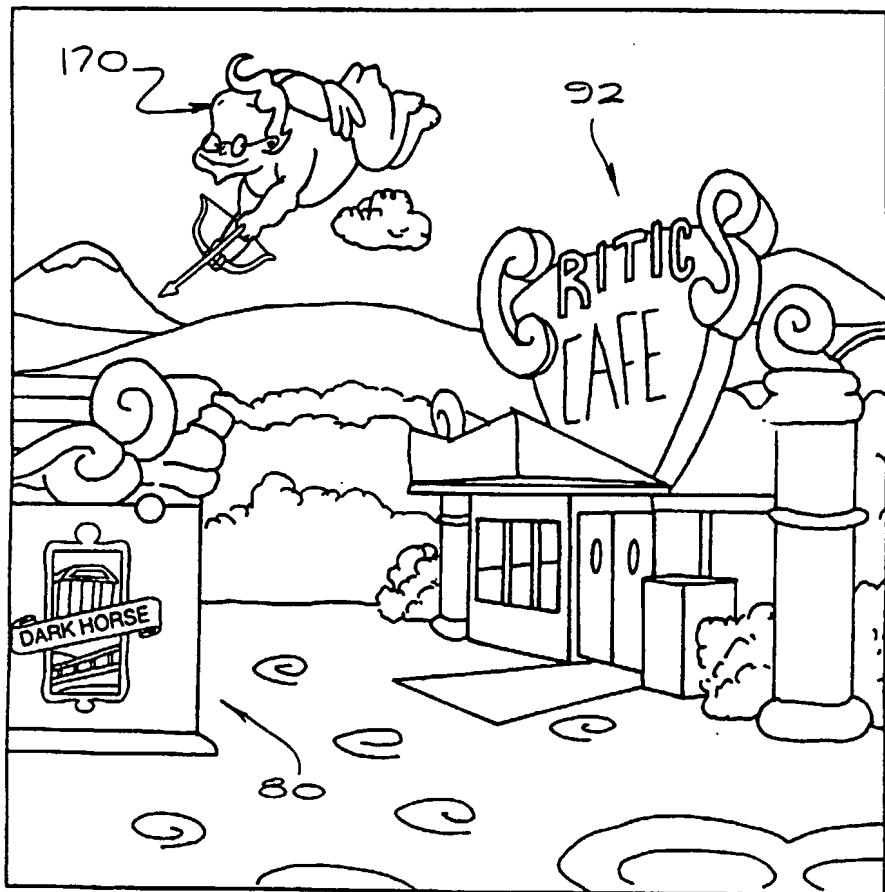


FIG. 14 (a)

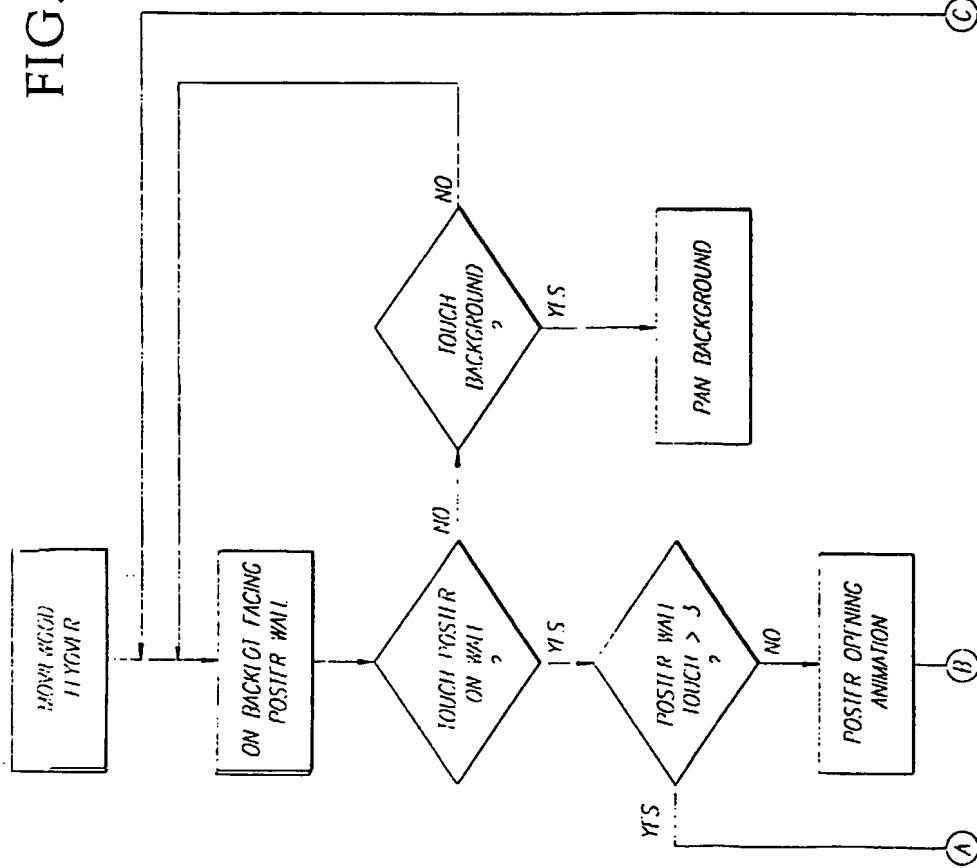
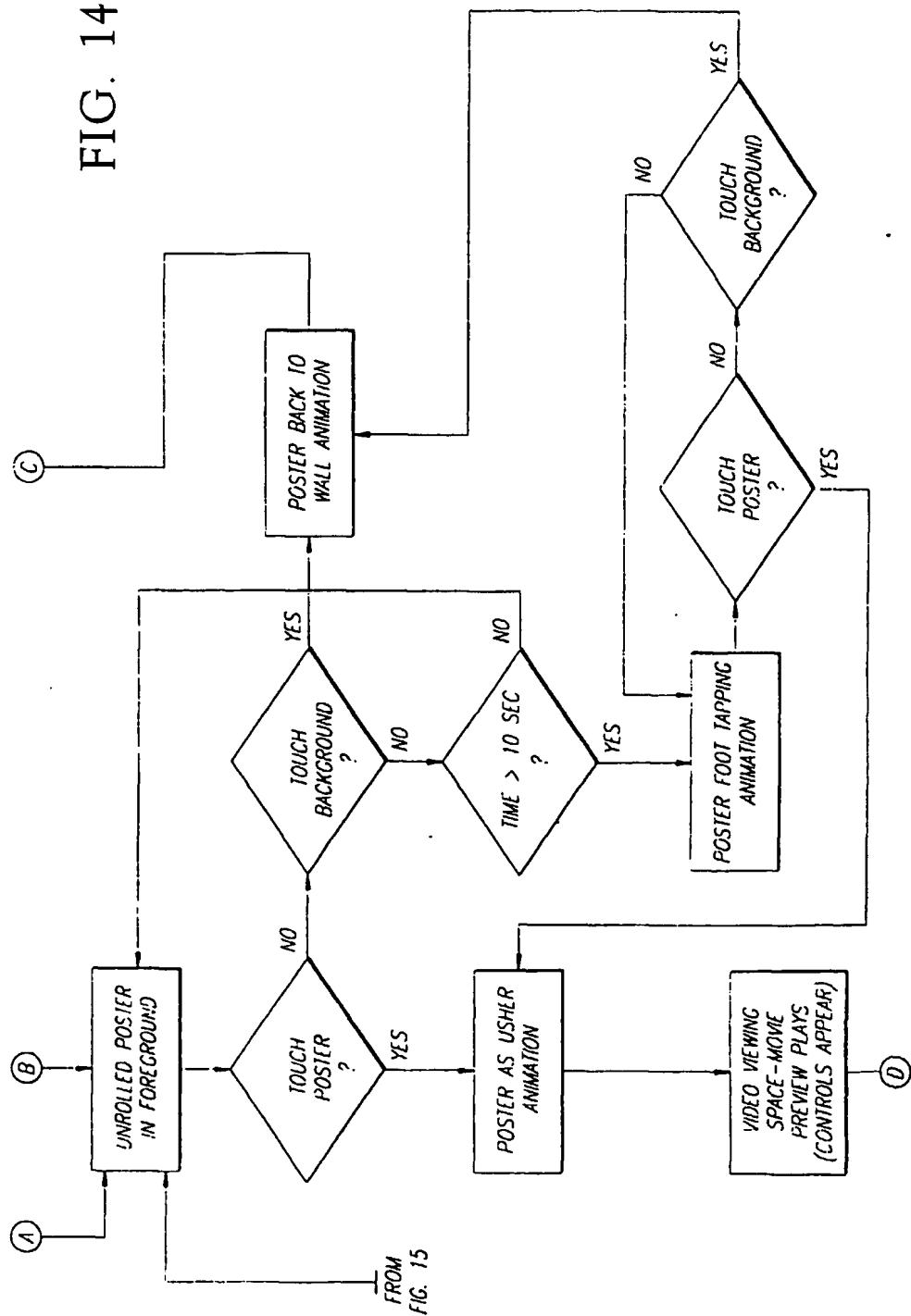
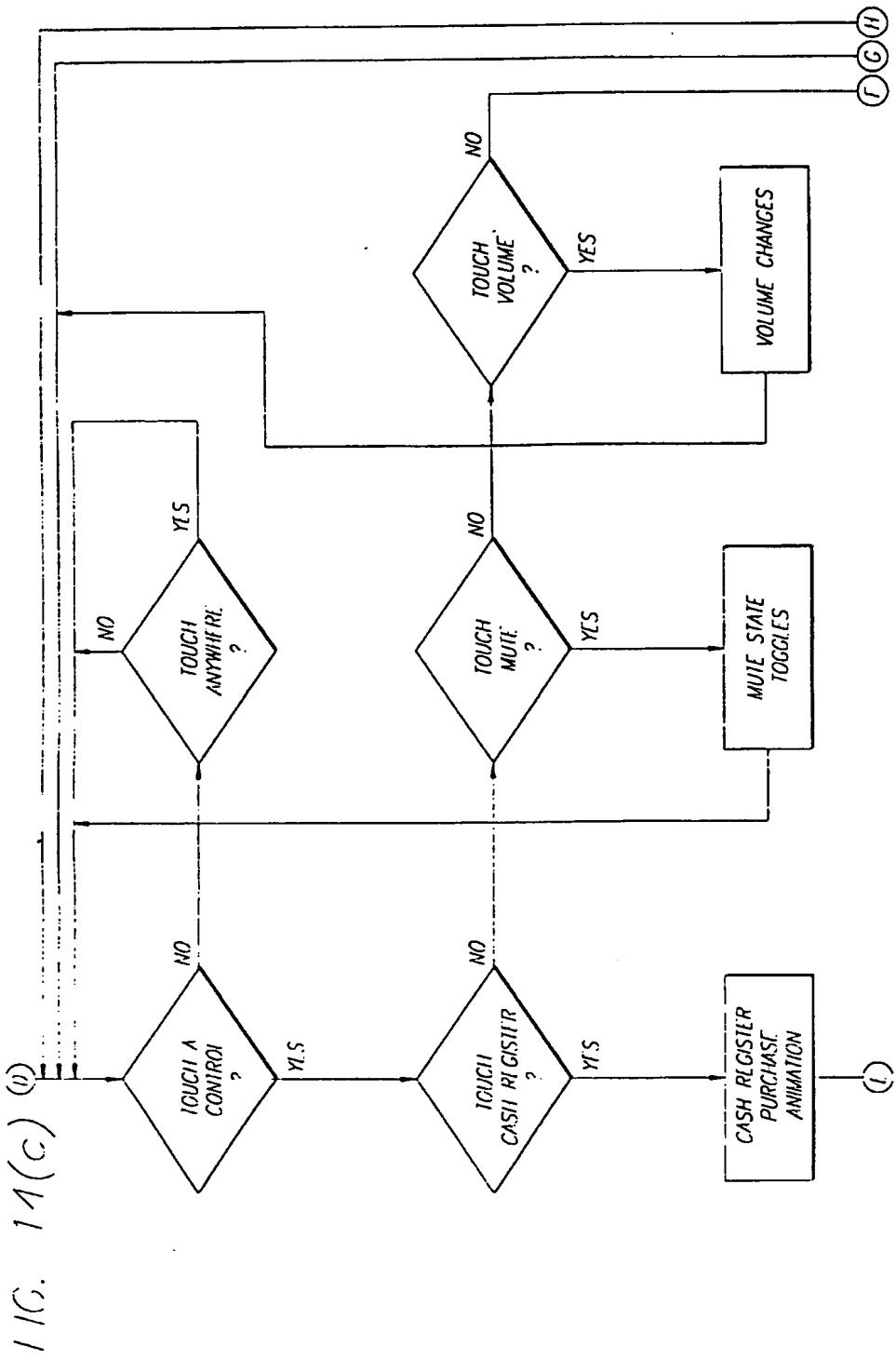


FIG. 14

14(a)
14(b)
14(c)
14(d)
14(e)
14(f)
14(g)
14(h)
14(i)

FIG. 14(b)





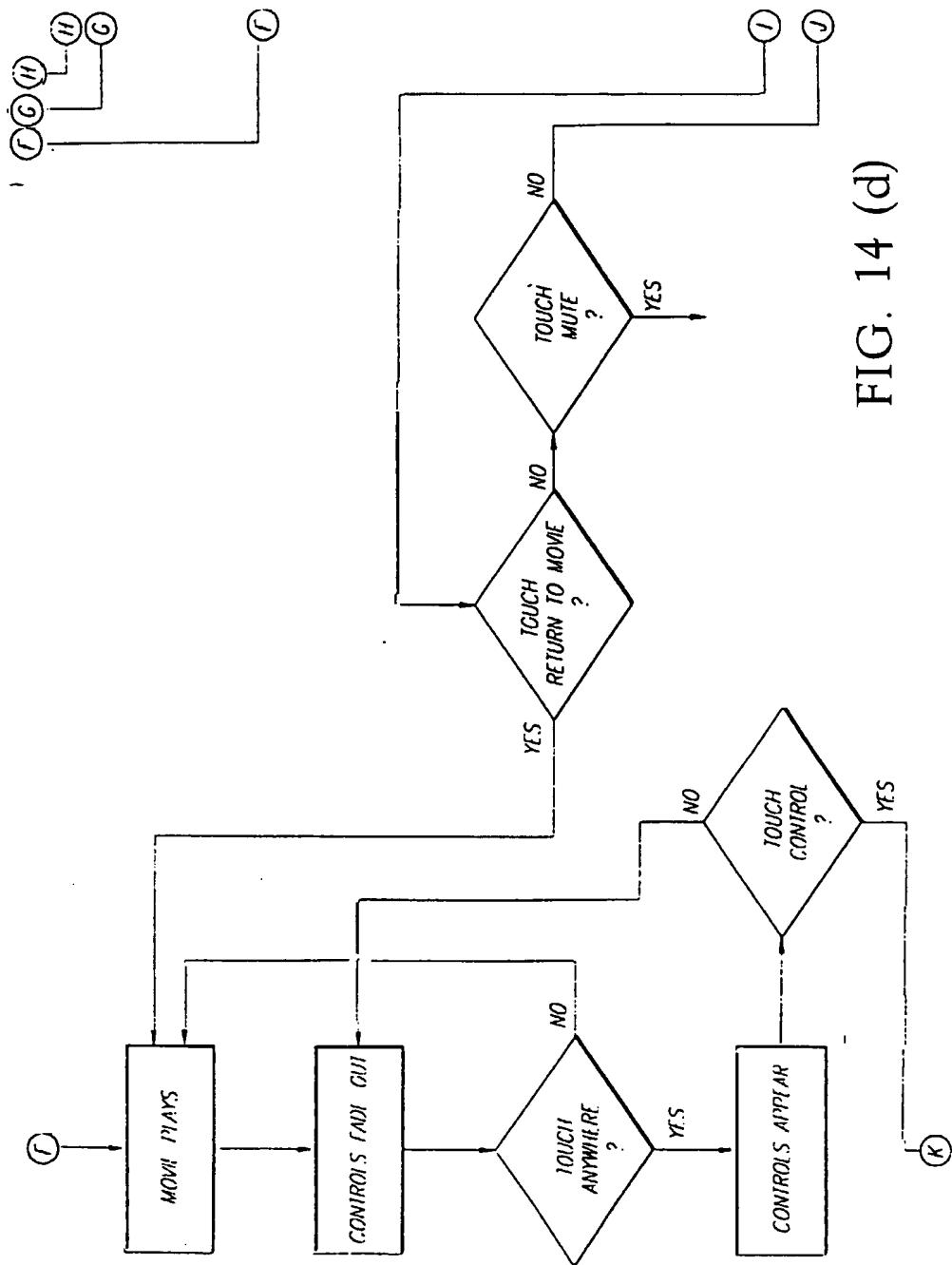
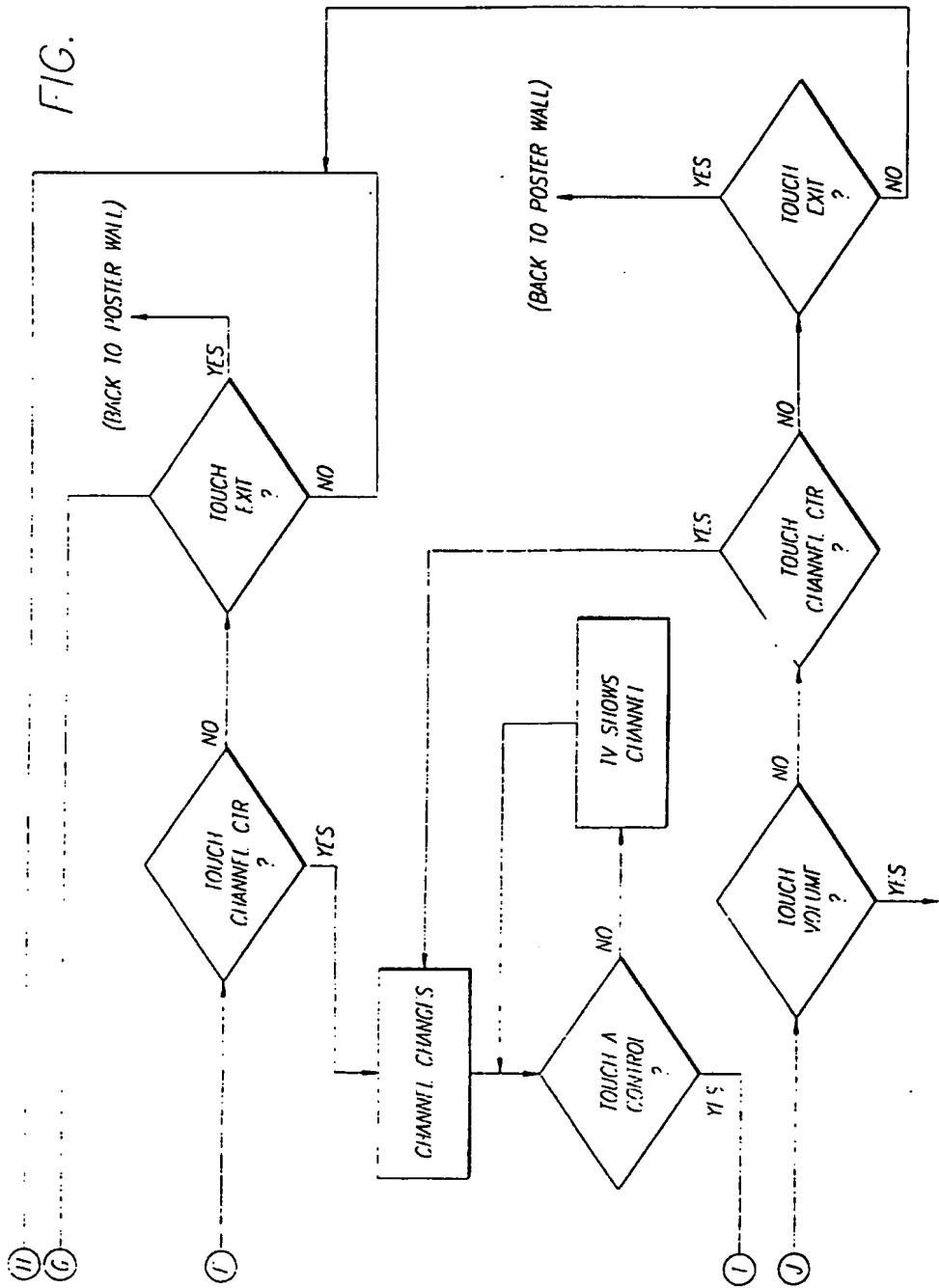


FIG. 14 (d)

FIG. 14(c)



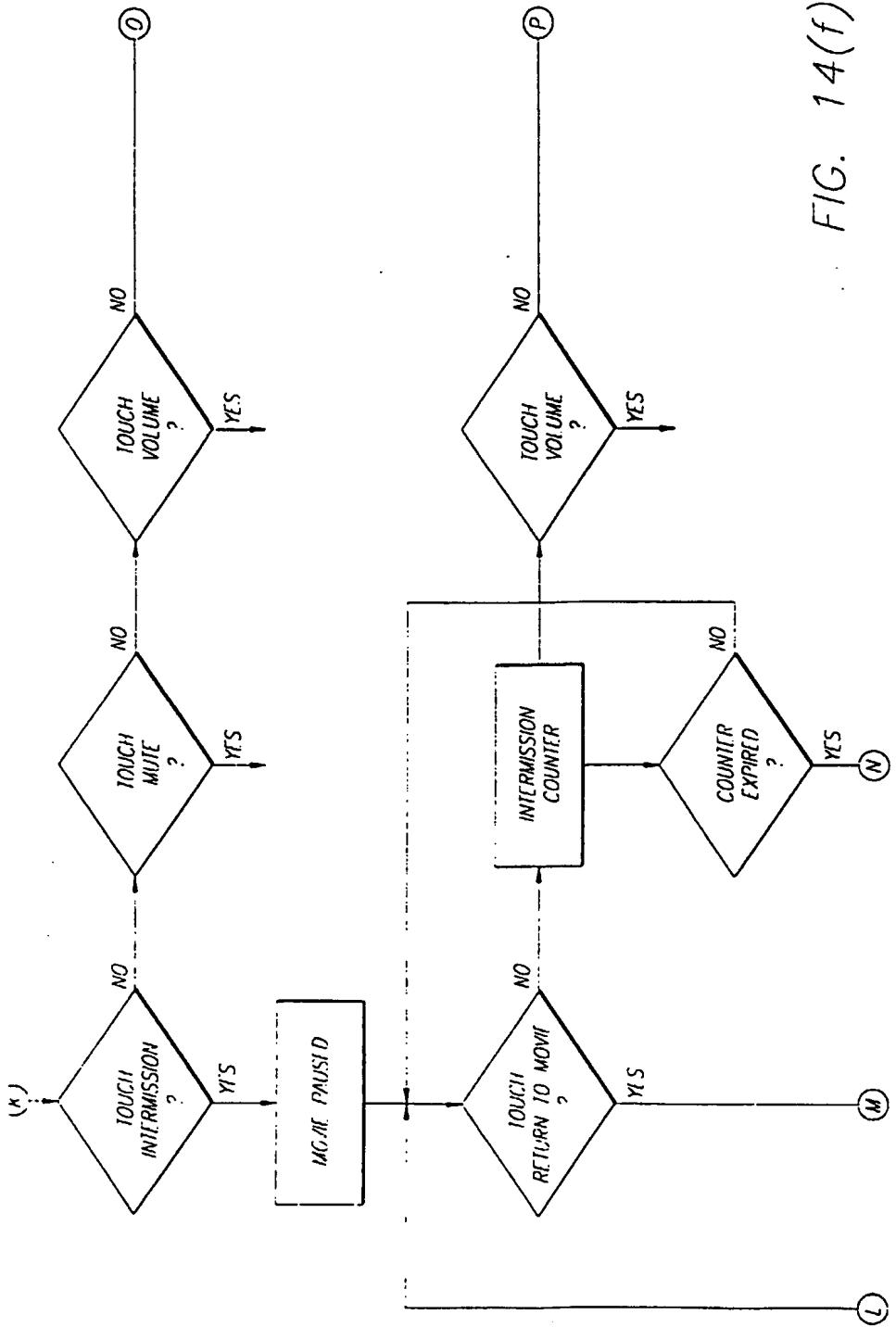
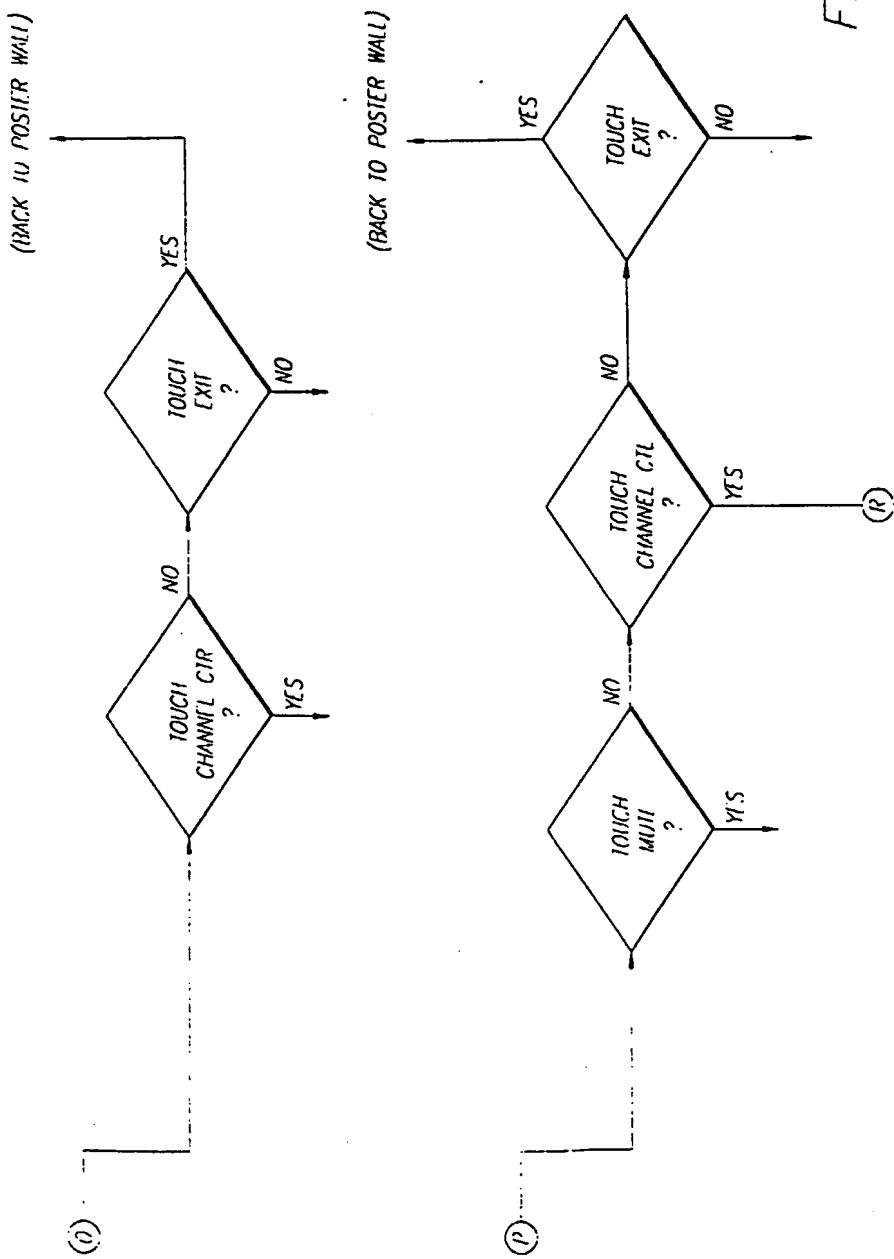


FIG. 14(f)

FIG. 14(g)



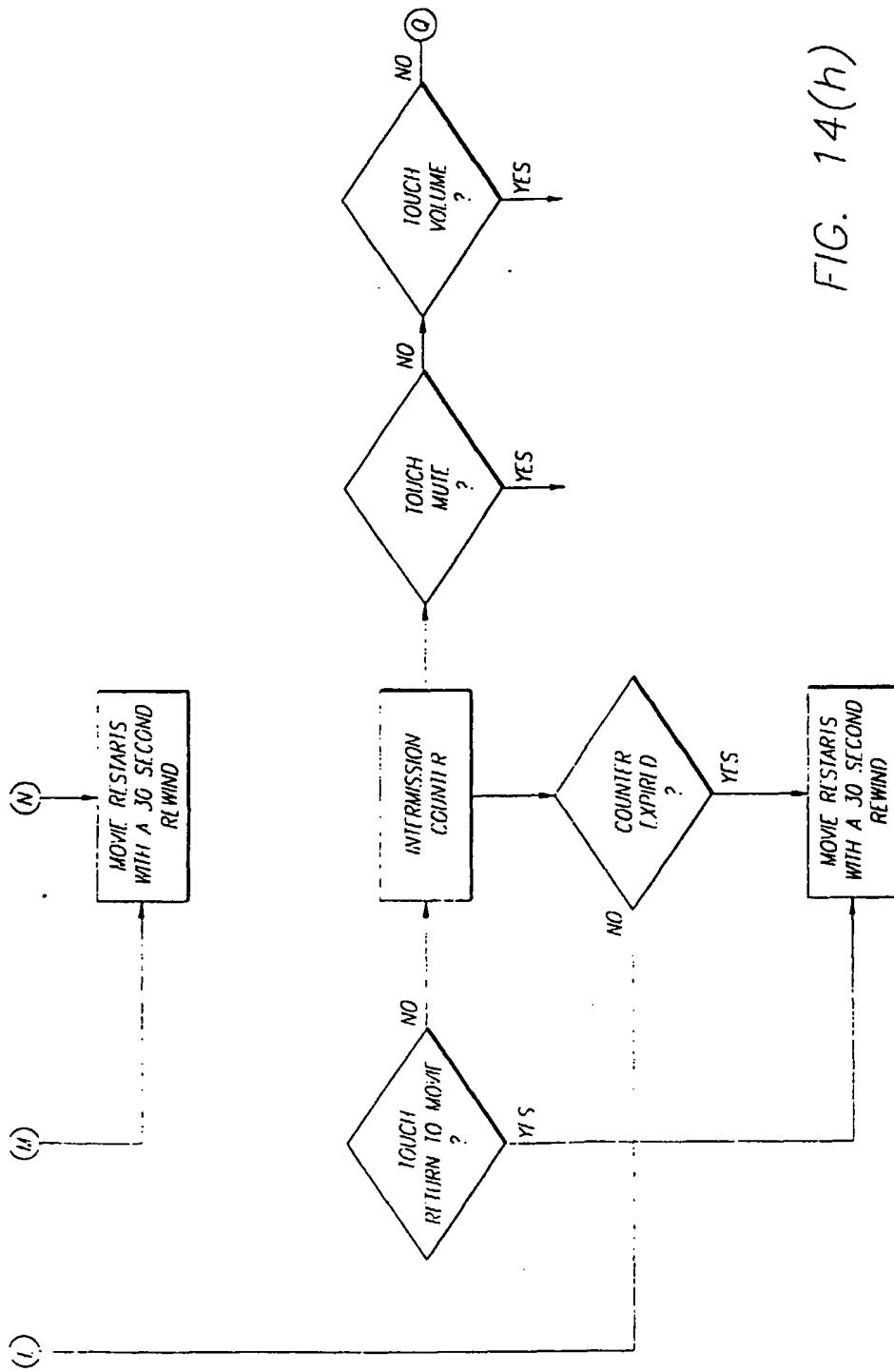
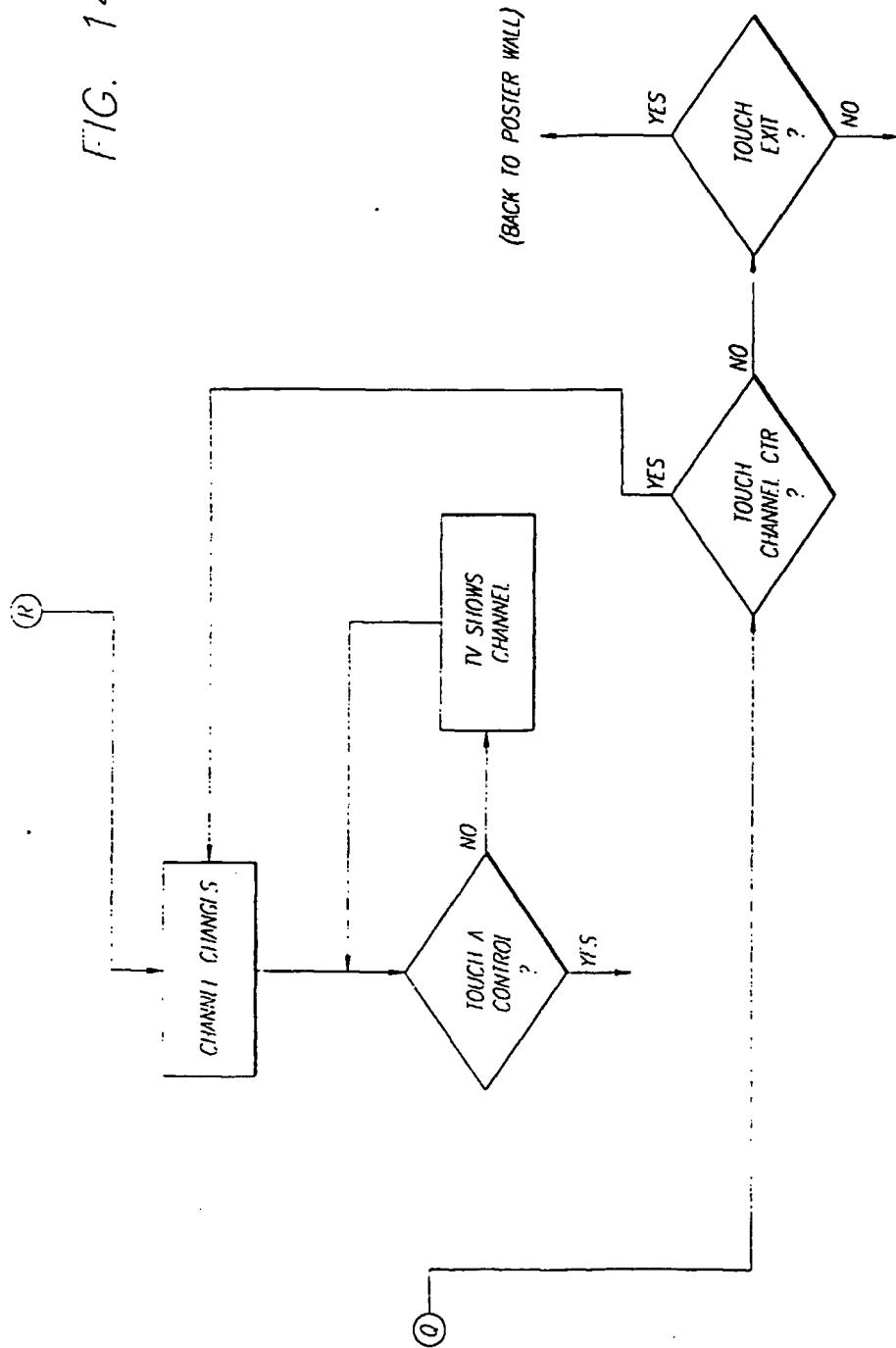


FIG. 14(h)

FIG. 14(j)



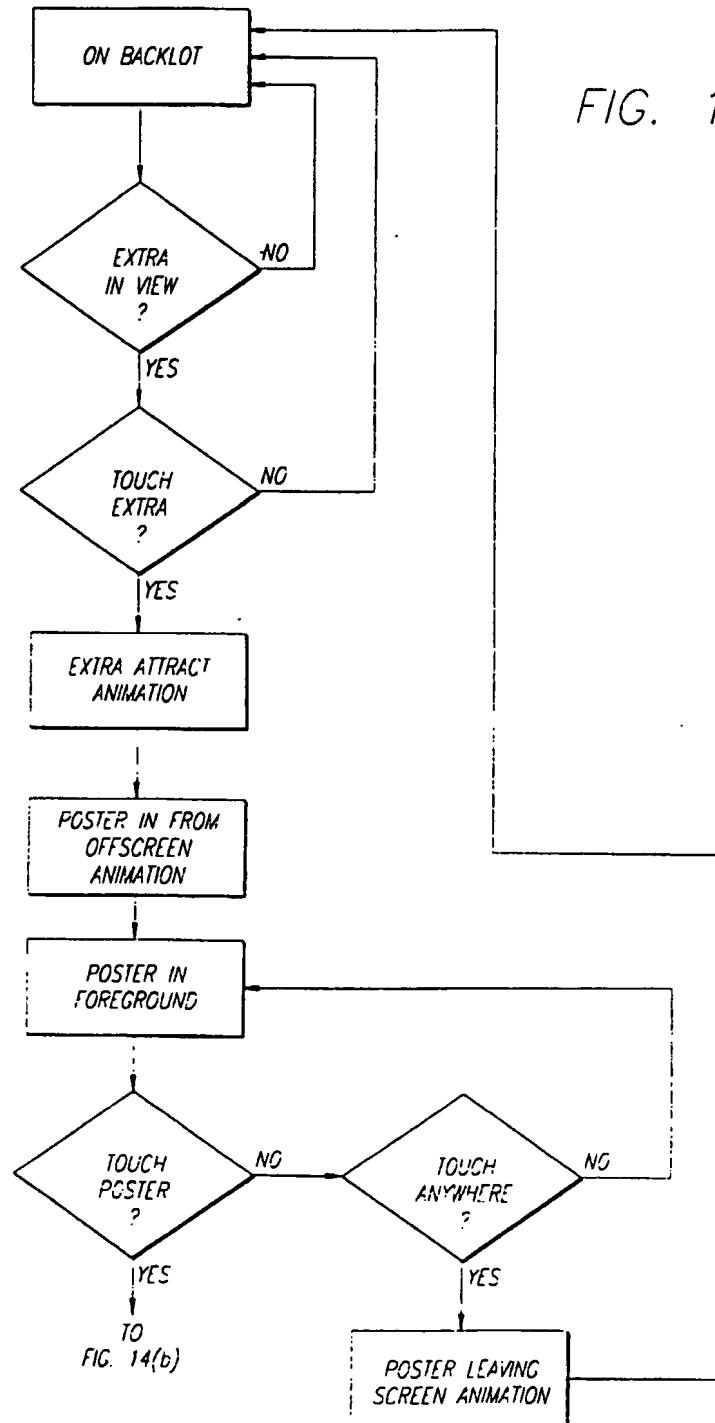


FIG. 15